*Lean*ing into Learning

Two Case Studies Exploring Organisational Learning in Healthcare

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List of Abbreviations

A&E	Accident and Emergency
ACS	Acute Coronary syndrome
CC	Cardiac Care
'CG'	Consulting Group – the pseudonym for the International Management consulting group
Consultant	Physician consultant - senior medical doctor practising in a speciality, i.e cardiology, surgery, neurology
GRACE Score	A risk score for determining severity of MI (mortality rate for an in hospital stay)
HF	Heart Failure also written as CHF Congestive Heart Failure
ICP	Integrated Care Pathway
MI	Myocardial Infarction - 'a heart attack'
NSTEMI	Non-ST Segment Elevation Myocardial Infarction
PCI	Percutaneous coronary intervention (usually a stent)
OL	Organisational Learning
RCP	Rapid Change Project in Lean
"Rege"	Registrar - advanced training specialist also written as SpR
RIE	Rapid Improvement Event in Lean
SHO	Senior House Officer – a Trainee doctor under the supervision of a Physician consultant and/or Registrar
SLAM	Service level agreement data – this is the data on admits and discharges that is used to charge back tariffs to funding bodies
STEMI	ST segment Elevation Myocardial Infarction
SVOT	Single version of the Truth - software programme to track patients
VSM	Value Stream Mapping

Abstract

The purpose of this research is to explore how learning moves through an organisation as a cognitive, behavioural and social process (Argote, 2011; Crossan, Lane and White, 1999; Huber, 1991; Easterby-Smith,1997; Easterby-Smith and Crossan, 2000) from the perspective of the employee. As a cognitive process, information is acquired by an individual and becomes part of their body of knowledge (Huber 1991) This knowledge eventually becomes part of the overall organisation's learning (Huber 1991 and March, 1991). The social processes pertain to how learning and knowledge is passed between individuals and an organisations (Elkjaer, 2003). The behavioural perspective of organisational learning focusses on how a person has changed their daily routine (Levitt and March, 1988).

The research focuses on individuals learning about their own work procedures and developing them into new routines (Fiol & Lyles, 1983; Feldman and Pentland, 2003). Two case study organisations in the early stage of introducing lean methodology to improve medical practice are used to illustrate how employees experience learning the lean method and learning new routines. Lean Methodology is a business process reengineering method that helps to reduce waste (Womack & Jones, 1997). Although Lean has been applied in many business manufacturing settings, recently Lean has become popular among healthcare organisations (Radnor Holweg & Waring, 2012; McCann, Hassard and Granter, 2015) to gain efficiencies and produce better patient outcomes with fewer members of staff.

The empirical part of this thesis presents fieldwork from two case studies in large multi faceted healthcare organisations, one in the US and one in the UK. The research includes: participant observation, document reviews, and semi structured interviews. Field notes and interviews notes were relied on to capture much of the data. Other forms of data include pictures of bulletin boards and other corporate items, PowerPoint presentations and other corporate archival documents from the two host institutions. The sheer volume of data from participant observation may elucidate how to approach this type of field work for future researchers.

The research contributes to scholarship pertaining to Organisational learning and Lean Methodology. Several notable insights have emerged: how individual perceive feedback they are given and that they give; knowledge sharing and communities of practice; the role consultants might play in influencing what is learned; narrative creation by both the employees and the organisation that influence what is embedded in the organisation and finally the dichotomy of what does get embedded in organisation from what was intended.

The key contribution of this thesis is a new construct: Aimless Learning. Aimless learning is different from no learning in that it is kind of surface learning that appears to have changed behaviours or cognition but in an 'outward display' of learning without ever having changed daily practice. Lean methods are a way of changing processes within an organisation to make it more efficient. Aimless learning makes it appear as though individuals are engaged in this new process but in fact they have not embraced any of the cognitive or behavioural ideas. The research offers an opportunity to review how individuals in Healthcare organisations approach learning and embrace Lean as a new way of working.

No patient data is included in this thesis. Although medical practices were discussed, NHS professionals were interviewed for their professional role and not to elicit any patient records or data. For this reason, NHS approval was not necessary, but the thesis received approval from the University of Bath ethics committee.

1. Introduction and Overview of the Thesis

My original contribution to knowledge is the notion of Aimless Learning in Organisational Learning. Many researchers have described barriers to learning (Rashman, Withers and Hartley, 2009; Wang and Ahmed, 2003) or the idea of unlearning (Tsang and Zahra, 2008) as a multilevel construct at individual, group and organisational levels. Researchers in the field of education have noted concepts such as surface and deep learning (Hay, 2007; Harrison, Price and Gavin, 2003) at the individual level. However, the phenomenon uncovered in this study doesn't quite fit into those definitions or concepts. The study will explain through the perceptions of individuals learning under lean conditions perceived their own progress in learning. Aimless learning describes an effort to maintain the façade of learning on a cognitive level but preserve previously known behaviours.

Organisational learning has been described as social, cognitive and behavioural process (Argyris and Schon, 1978; Crossan, Lane and White, 1999; Fiol and Lyles, 1985; Huber, 1991). The research has explored both individuals learning within organisations (Huber, 1991) and how the Organisation learns (Easterby-Smith and Lyles 2011). It is further argued that there are significant feedback loops to learning (Argyris, 1976) that have a close association with problem-solving. Single and double loop learning, levels of learning, interactions between individuals, groups and organisation have undergone scrutiny. It has been further argued that power and politics affect learning (Lawrence, Mauws, Dyck, Kleysen, 2005) . Any of these aspects might also represent barriers to learning. This research goes further, to say that there is the possibility that beyond rote learning, individuals might achieve only a superficial learning that does not embed the ideals and changes envisioned by the organisation.

The healthcare industry is under extreme pressure to deliver more at lower cost whilst maintaining quality. Many hospitals have turned to other industries for inspiration on how to become more efficient. In recent years, Lean methodology has become a source of fascination for medical professionals. The Institute for Health Improvement in the USA began publishing white papers on standardisation in healthcare almost 30 years ago with Don Berwick's Cost and Quality Movement (1989) and Atul Gawande's Checklist Manifesto (2009), The Triple aim: Cost, Health and Quality became the buzzwords of the American health system (Berwick, Nolan and Whittington, 2008). Lean Methodology was adopted as a learning process to achieve these aims (IHI 2005). The two host institutions, in which I was a participant observer, were instituting lean methodology as part of a learning and change programme. This provided an ideal opportunity not only to observe lean implementation but also to observe learning in situ.

Research Questions

In healthcare, particularly, learning is assumed to be highly structured and linear. Equally, Lean represents an ordered process to embed new ways of working. There is still a great that is unknown about learning in general and learning in a healthcare environment. The object of this research study was to explore learning both in general within a healthcare setting and in particular under the condition of introducing Lean methodology in a healthcare environment. Therefore, the main research questions of this study were:

RQ 1

How do individuals, in general, experience *learning* in a healthcare organisation that is introducing *Lean processes and methodology*?

RQ 2

How do employees experiencing Lean Implementation perceive the *process of learning* as it gets embedded into the organisation and into the individual work routines in this type of organisation?

RQ3

How is learning perceived to *move* across the healthcare organisation from individual to the group and then embedded into the organisation especially during the implementation of Lean?

RQ4

How do employees experiencing Lean Implementation describe the aspects of *influences of the organisation* that affect learning which will eventually be embedded into practices?

Overview of Theory

An organisation's capacity to successfully learn new behaviours and routines within its groups and individuals is of considerable theoretical and practical importance (Argote and Ingram, 2000, Edmondson and Moingeon, 1998, Marquardt 2011). Understanding how that learning moves through the organisation is a continuing complex issue that requires further investigation (Argote, 2011; Radnor, Waring and Holweg, 2012). Organisational learning (OL) The literature has been fragmented by different perspectives on learning and levels of analysis (Argote, 2011; Easterby-Smith and Lyles, 2011, Dierkes, Antal, Child and Nonaka, 2001).

There are a number of different strands to OL research; behavioural, cognitive, psychodynamic and social. Each strand has developed its own nomenclature and operationalised constructs. Huber (1991) for example, established constructs such as 'information distribution' and 'information processing'. Huber uses these constructs as cognitive antecedents to Individual learning (IL). These are useful in their capacity to study individual action. This current study is focussed on the end-to-end movement of learning.

Thus, use of an alternative wording offered by Easterby-Smith and Araujo (1999) is more relevant to place two separate streams of OL research into a technical view or social view of OL. The technical view considers the processes involved in interpretation and response to information from both internal and external organisational sources. The social view focusses on how people make sense of their learning. This research is concerned both the social view and the 'technical' processes as defined by Easterby-Smith and Araujo (1999). Within the technical aspect of learning there are a

'number of dilemmas' (Crossan, Lane, Maurer and White, 1999; Easterby –Smith, Burgoyne and Aruajo, 1999; Levinthal and March 1993). A friction between developing new ideas (exploration) and the operationalising efficiency of existing methods (exploitation) influences organisational learning and how it is embedded into routines and work practices is not well understood (Cyert and March, 1963; Crossan et al, 1999; Crossan and Berdrow, 2003; Leavitt and March, 1988). Individuals in organisations need to sift through mounds of information to make sense of whether an exploratory or exploitative strategy is necessary. A number of scholars; Huber (1991), Fiol and Lyles (1985), Crossan, Lane and White, 1999) have attempted to collate the concepts of Organisational Learning into unified theory.

More recent organisational literature suggest that Crossan's work (1999) is a useful pragmatic framework for understanding individual and organisational learning (Van de Ven as quoted in Crossan, Maurer and White, 2011, p 447.) The 4I framework helps us to analyse organisational learning as a multi-level process across four stages: intuiting, interpreting, integrating and institutionalising. There is little empirical evidence relating directly to the 4I framework for the way in which the feedback and feed-forward loops operate within organisations and how employees experience the four stages (Crossan and Berdrow, 2003; Dutta and Crossan, 2005; Bontis, Crossan, and Hulland, 2002).

The study expands on previous work of organisational learning and in particular learning in healthcare teams (Cannon and Edmondson, 2001; Crossan et al, 1999; Crossan and Berdrow, 2003, Tucker and Edmondson, 2003). Lean methodology has gain popularity with healthcare organisations to provide efficiencies. Learning to embed new lean practices into healthcare organisations has implications for both academic and practical research (Radnor, Holweg and Waring, 2012; Proudlove, Moxham and Boaden, 2008; Flinchbaugh, 2008).

Lean methodology is a way of reducing waste and redundant practices. It is has been widely used in the manufacturing sectors such as the car industry (Womack and Jones, 2010). Lean is based on the philosophy that Organisational leaders will create a culture of learning and critical reflection. Lean also stresses the idea of standardisation and this is the concept that appeals to many Healthcare organisations. There is a delicate balance between standardisation and variation in healthcare.

Routines and protocols are needed to provide a base level of treatment to patient to guarantee safety and efficiency (Berwick, 1989; Berwick, Nolan and Whittington, 2008). Medical routines represent an opportunity to observe learning in the workplace (Feldman and Pentland, 2003). Using routines as an example of learning, one is able to 'map' learning (Feldman and Pentland, 2003; Feldman, 2000; Schulz, 2002). While routines can form the backbone of an organisation's strength, changing these embedded ideas can be difficult. This aspect of study will build on previous research that has linked learning Lean methods with individual and organisational level learning (Flinchbaugh, 2008; Feldman, 2000; Feldman and Pentland, 2003) and in particular learning a lean process routine in healthcare (Radnor, Holweg and Waring, 2012; McCann, Hassard, Hyde and Granter, 2012).

Methodology

This study uses an interpretivist/ constructivist approach as there are 'multiple realities' (Lincoln and Guba, 1985) to the way learning is perceived to move across an organisation. The study has its ontological home in social constructionism (Berger and Luckmann, 1966). Each organisational member ascribes meaning to their perception of how they believe they've been introduced to an idea and how their learning has been embedded into their everyday work practices. Therefore, I use research methods that are able to elicit different perspectives.

A limitation of the interpretivist perspective is that the researcher brings their own biases to the interpretation of the data. The data itself is fraught with 'biased texts' from the influences of gender, race and culture (Denzin and Lincoln, 2002). To counteract the limitation of interpretivism, the explanation must not be a simple analysis of the facts or data, instead one must be aware of assumptions and biases on the part of the researcher (Symons and Casell, 2012). One must be aware of these limitations and address them with a degree of reflexivity in analysing the data (Denzin and Lincoln, 2002).

The study is divided into two parts: the first is a general consideration of organisational learning theories and in particular the 4I framework; the second part of the thesis is devoted to uncovering a deeper understanding of how learning is perceived among medical professionals when introduced to lean methodology as part of their medical routines. There are two distinct case studies both focusing on organisational learning and lean but providing different insights into the way in which individuals perceive their learning. Acknowledging the constraints of qualitative research, this study gives rich detail in the variety of data that has been collected and presented here.

Case Study Design in Qualitative Research

Within the adopted methodological approach, Case study (Eisenhardt, 1989; Yin, 2002) can be appropriate research strategy. A Case Study approach aims at understanding a particular case deeply, with regard to its context. Case Study helps examine the role of contextual factors on the learning process (Stake, 2005). Thus, it allows for focus on specific characteristics and phenomenon of the cases (Stake, 2005; Yin, 2002) to capture the specificities of learning practices within Lean Methodology.

Case Study design also suits studying the process of organisational learning (Stake 2005). The researcher has the ability to collect data in a chain of events, actions and interactions with particular attention to beliefs, attitudes and perception of the participants. Collecting rich data about all aspects is critical to outline the details of organisational learning.

There are several options in designing case study research (Yin, 2002). Case Studies can be exploratory (to openly explore a phenomenon) or explanatory (to look for the causes of a previously identified phenomenon). I the greater portion of emphasis in the current research study is an exploratory approach since the aim is to openly examine how OL unfolds within the context of a healthcare organisation undergoing lean implementation. However, there are also elements of explanatory approach in uncovering how individual in the process of learning lean develop their perceptions of learning and learning Lean.

I rely on a multiple case study design because it allowed for exploring different aspects of organisational learning. I am not going to compare the two case studies in a comparative analysis. Instead the two different case studies will help in finding various patterns and perception in the OL process. In addition, the multiple case study design provided a wide variety of data points and types of data. Through the two case studies, I reach a deeper understanding of the influences of Lean on the leaning process and on the perceptions of the individuals in those circumstances by paying attention to the experiences in those two cases (Eisenhardt, 1991; Yin, 2002).

Regarding the Unit of analysis (learning process), the level of analysis (individual), the aggregate level of the study is the individual level. Hence, through an embedded-multiple case study design (Yin, 2002) I study multiple experiences of learning under lean implementation.

I was fortunate to have prolonged access to the Case Study Organisations. Therefore, it was possible to take longitudinal view of the cases and capture the dynamic nature of the learning process (Leonard-Barton, 1990). It means that I have been able to build a story around the experiences of individuals in their learning process, consisting of sequences of actions, interactions, events and consequences. This longitudinal view helps to build an impression of the process of learning under Lean (Langley et al, 2013; Langley, 1999) through which I can make sense of the learning process.

Case Study One

The first case study focused on understanding how learning is embedded in an organization, using the 4I framework as a guide to understand OL. While this study is not suggesting to complete theory of the 4I framework, Case Study One uses the framework as a way to illustrate the underlying intricacies of learning within a healthcare organisation. In Case Study One , I uncover insights from organisation members on their accounts of 'missing steps' or the 'entering and exiting' of learning in the 4I framework (Crossan et al, 2011) as proposed in my pilot study. Existing research shows the four stages of learning and their complementing feedback loops can be overlaid into an organisation to describe the learning (Bontis, Crossan and Hulland, 2002; Berdrow and Crossan, 2003, Crossan and Apaydin, 2010; Dutta and Crossan, 2005). However, critics of existing research claim that it is largely conceptual, and that there is a need for more empirical work to establish how learning moves across the organisation (Shilling and Kluge , 2009; Argote 2011).

Case Study Two

Case Study Two broadens the comparison to other theories of learning and introduces theoretical concepts such as communities of practice, narratives and storytelling in organisations. In Case Study Two, I uncover perceptions around learning lean practices, as well as implementing them into new routines. This offers insights into how individuals interpreted new ways of doing things, integrated them amongst their peers and practice groups, and finally embedded them into institution's routines. It also provides some insight to how feedback within learning lean is perceived by organisation members.

These two case studies add to the body of empirical knowledge relating to OL and lean methodology as it allows us to explore the 'entrances' and 'exits' of learning in the implementation of new ways of working. This study also helps us to understand how learning, knowledge ownership and managerial control are perceived by employees. Building on the first study, Case Study Two delves deeper into how the organisations members distinguish interruptions, influences and the organisation's information in their learning. The themes and dimensions described as part of this PHD study align with the work on lean methodology by Radnor Holweg and Waring (2012); Flinchbaugh (2008) and McCann, Hassard, Granter and Hyde (2015).

Emergent themes

There are two set of themes that emerged from the data with seven aggregate dimensions. The dimensions are: 'Triggers of Non-engagement', 'Arrested Learning', 'Role conflict', 'Discipline and domination', 'Barriers (1) Organisational', 'Barriers (2) Employees Expectations', 'Integration of the Myth'. . Case Study One and Case Study Two have their own set of themes, concepts and aggregate dimensions. Whilst related to each other, there aren't identical. Differences emerged as further detail was uncovered about employee perceptions. Case Study One used the Crossan 4I matrix as a frame or reference to explain interdependencies. The themes in Case Study 1 are: Policy fatigue, discrepancy in application, conflicting managerial agenda, distancing, and disconnectedness. The final dimensions in case study one are: Triggers of non-engagement, arrested learning and role conflict. In exploring further the ideas of arrested learning and triggers for non-engagement, Case Study 2 widened the scope of data collection and data analysis to compare the empirical evidence with a broader range of literature. In Case Study Two the concepts and themes discussed are: organisation dysfluency, silenced, Role of management consultant, managerial control, knowledge ownership, waning interest, application discrepancy, public belief in data, myths stories and lies, consultant omniscient, fads & fashions, casting the lean spell time counting. The inductive method of analysis (Corley and Gioia, 2004) generated four main dimensions. In case study 2 these are: Discipline and Domination, Barriers (1) Organisational, Barriers (2) Employee expectations, Integration of the Myth.

Format of the thesis

The remaining part of the thesis comprises five Chapters. In Chapter Two, the relevant literature and models that inform our understanding of organisational learning perspectives, the contemporary 4I learning framework, Lean Methodology and routines are presented. In addition, the current debates of Lean Methodology and Learning in Healthcare are discussed for their particular challenges (Radnor, Holweg and Waring, 2012; Stan and Vermuelen, 2012).

The focus of Chapter Three is the methodological approach and the philosophical underpinning of the research design. I explain my philosophical choices and justify the methodological approach. The background and organisational context of both Case Study organisations is explained. A detailed description of data collection and data analysis methods deemed suitable for this research are given. Special consideration is given to the variety of data collected for this study and how I collated the data in preparation for the coding of the material. A further discussion of the coding and the

analysis is illustrated culminating in the first two data structures of the studies. In Chapter Four, Case Study One is presented in its own context and its relationship to the 4I framework is reviewed. The content of Chapter Four was presented as part of an OLKC conference paper on the findings of Case Study One. These findings formed the basis of the initial investigation into Organisation Learning and the 4I framework. Therefore, Chapter Four reads as a distinct text within the thesis. Chapter Five presents the findings from Case Study Two. This forms the largest portion of the research with a very in depth discussion of the twenty-five first order concepts, thirteen second order themes and the final four aggregate dimensions of 1) Discipline and domination, 2) Barriers [1] Organisational, 3) Barriers [2] Employee Expectations, and 4) Integration of the Myth. The concepts and themes are described and accompanied by data examples. Chapter Six explains and discusses the findings in relation to the four research questions. Chapter Seven puts forward the theoretical and practical contribution of this thesis to existing literature and concludes with the limitations of the present study and a look to the future research using the new theoretical construct of aimless Learning. Some final words on the unique challenges of this type of research and personal challenges during the study complete the thesis.

CHAPTER 2

2. Literature Review

2.1. Introduction

This chapter sets out the landscape of organisational learning literature and lean methodology that is pertinent to the subject of this thesis which is learning in the context of a healthcare organisation. A comparison of the main theoretical viewpoints of organisational learning, the current popular theoretical framework of the '4I framework' together with the literature on routines in healthcare as they relate to organisational learning, and a section on the idea of tension in learning are presented in the following chapter. Next, a brief discussion of tension is given because healthcare contains a peculiar mix of rigid adherence to conventional learning wisdom and the need to change with new discoveries. The empirical work for this study was conducted in two separate healthcare organisations; therefore, I have also included section on Lean in Healthcare and a section on Learning in Healthcare.

2.2. Organisational Learning Perspectives

Organisational learning continues to be an important theoretical perspective for improving what organisations do, challenging stuck assumptions, encouraging innovation and embedding change. It encompasses many different levels from individual, group and organisational as well as different disciplines and ontologies (Easterby-Smith, 1997). There is still some debate whether it is a collective process of individuals or whether the organisation itself holds memory and information (Huber, 1991; Kim, 1993; Dodgson, 1999; Maier, Prange and Rosenthal, 2001).

In the earliest writings on behavioural theory of the firm (Cyert & March, 1963; Cangelosi and Dill, 1965), organisations are said to 'learn' from their past experiences and adapt to their environments. Organisations develop rules, guidelines, standards and policies as part of their learning (Cyert & March, 1963; Leavitt and March 1988). As an organisation adapts to its environment, it learns to adjust those routines and policies. Cyert and March (1963) argued that organisations must adapt to their situations and problems or become extinct. Individuals were the tools for learning but the organisation itself could still 'learn' through the cumulative and aggregate knowledge of the individuals within it. These ideas were the catalyst for organisational level investigations of learning in addition to those that focus on individual learning.

Organisational learning is founded in premise that organisations continual renew and alter knowledge through influence of individual knowledge learning on the group. Changes in practice

may lead to new premises of fact and the development of new knowledge (Fiol and Lyles, 19085). Knowledge is developed in a number of ways. Different disciplines have explored the foundations of organisational learning from various perspectives.

There are four lenses through which scholars have approached OL: cognitive (Akgun, Lynn and Byrne, 2003; Cook and Yanow, 1993; Dodgson, 1993; Huber, 1991); behavioural (Leavitt and March, 1988; Zollo and Winter, 2002; Miner and Mezias, 1996); experiential (Brown and Duguid, 1991; Kim 1993; Kolb, 1984; Nicolini , Gherardi and Yanow, 2003); and psycho-dynamic (Vince, 2002; Sturdy, 2004).

Cognitive Perspective of organisational learning is characterised by how individuals change their causal mental maps by absorbing, processing and retaining knowledge (Akgun, Lynn & Byrne, 2003). The acquired knowledge is then used to develop mental models for use in future decision making and taking action. This is particular important in organisations so that individuals may be called upon to act in situations outside their normal work routine. 'Cognitive structures' are developed through assimilation of facts but also beliefs and attitudes that will ultimately guide an individual through actions and behaviour (Lave, 1988; Nicolini and Meznar, 1995). The cognitive structures help to support the idea of 'systems thinking' in organisations (Senge, 1990). Systems thinking provides a focal point for acquired knowledge to be embedded into routines in organisations. Learning is conceptualised by acquisition of new insights which can then be used to form new maps or systems. In organisations, this is accomplished through continuous change and hared of new schematic maps among individuals within the organisation.

The Behavioural perspective on learning in organisations is primarily occupied by how individuals interact with their environment (Shipton and DeFillipi, 2011). In this perspective, learning results in a change in behaviour. The change may be attained through experience, practice or training. Appropriate reinforcement can produce d a desired behaviour. In this perspective there are some key factors to consider such as: individual motivation, repetitive practice, individuals' surroundings and their social group. "Learning and progression may not be necessarily conscious, but rather a necessary part of the human condition." (Shipton and Defillipini, 2011, p 87). In this perspective, learning is largely measured by observable change in behaviour. When an individual reacts differently to stimuli with a desired organisational behaviour, the learning is deemed to have taken place. Behavioural patterns can be repeated so that they become automatic and can be embedded into organisational routines.

Experiential Learning perspective is favoured by organisational development practitioners and theorists. It provides a basis on which to explore the learning that occurs through reflecting on experiences in the workplace. The popular practitioner explanation of experiential learning is Kolb's (1984) learning cycle. Kolb's cycle has four stages; concrete experience, abstract conceptualisations, reflective observation and active experimentation. The learner proceeds through a sequence of experience, reflecting, thinking and acting in a similar way that medical profession describes the Plan-do-study-act cycles of continuous improvement. Experiential learning strives to capture the process of human adaptation through the reflection of experience. For Kolb " learning is the process whereby knowledge is created through the transformation of experience" (1984, p 38). Organisation members gather and create knowledge through their every day experiences in the workplace. In his way, organisations have distinctive ways in which their members learn. Organisational learning has distinctive characteristics of what is learned, how it is learned and the adjustments called for to enhance the learning. An organisation is a collective of individuals who have different perspectives and values and apply newly acquired information through different

filters. Experiential learning aims to capture new knowledge and develop new ways of working through reflection and feedback.

Psychodynamic perspective of learning adds the elements of emotion (Sturdy, 2004; Vince and Gabriel, 2011; Vince, 2002). The emotional component of learning can manifest as anxiety or projections of fantasies about the content of the learning. In organisations this may translate in to assumptions about managerial agendas for the justification of the learning. The key component in this perspective of learning is the role of emotion. Emotion can drive the beliefs and actions of organisational members as they learn or indeed what they decide to learn. Emotion may be the 'by-product' or an inhibitor to learning (Antonacoupoulou & Gabriel, 2011). The psychological influence on organisational members must be taken into account when trying to understand what has been learned and what can be learned. Anxiety over organisational change or disruption may impact how or what is learned (Clancy, Vince and Gabriel, 2011).

Other perspectives have denoted learning as having strong social and shared components (Brown and Duguid, 1991; Kim, 1993). In these perspectives, organisational learning is viewed as a social process with multiple actors (Argote and Miron-Spektor, 2011). Sharing, interpreting and combining each other's knowledge creates greater understanding and moves the learning to a group level, e.g. echocardiogram specialist their knowledge with each other in social conversation. In order for the group to assimilate the 'shared knowledge', there must be a transfer of individual knowledge to the broader setting of the group. The socialisation of individual practices leads to learning and embedding the learning routines in the organisation (Nonaka & Takechuchi, 1995, Nonaka, 1994).

Yet another view of learning is 'situated learning' moves OL which moves away from the individual mind to a sphere of social interactions becoming something active that also needs practice and repetition (Brandi & Elkjaer, 2011). Learning in situated in authentic activities, e.g. nurses learn from working at the bedside with colleagues. The learning is accomplished almost unintentionally by natural sharing form one nurse to another. Lave and Wenger (1991) called this legitimate peripheral participation. It is part of the shared experience that individuals enhance both their tacit and explicit knowledge. For the shared experience to occur, Lave and Wenger (1991) postulated the idea of a community of practice, i.e. a group of people who shared a common interest and interact on a regular basis. For shared learning to take place; there had to be three things, a domain, a community and a practice. The 'domain' of learning is the shared interest such as caring for patients. The 'community' might be the status of belonging to a group, e.g. healthcare workers. The community is held together by some legitimate form, for instance *nurses* in a healthcare setting.

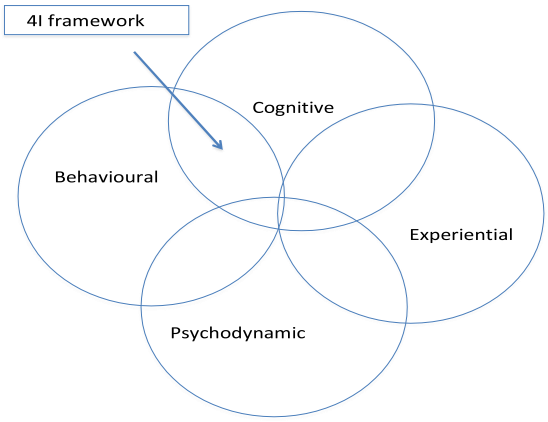
Finally, individual learning is transferred to the organisation through mental models (Senge, 2006). Each individual holds a model of how they perceive the world works. This of course influences how a person behaves and the ways in which new information and knowledge can be shared or assimilated into a group. Huber (1991) and Kim (1993) supported this notion in their earlier works proposing that organisational learning was a product of shared interpretation of both the know-how and the know-why of the organisation's 'ways of working'.

Crossan, Lane and White (1999) consider how the learning moves from an individual to a group level. The 4 I framework (Crossan et al, 1999) consists of four psycho-dynamic processes which connect learning from an individual processes such as intuiting and interpreting to group and organisational level processes such as integrating and institutionalising. Learning is conceived as a dynamic flow, which starts at the individual level, and flows naturally to the group and organisational level through the interactions of individuals. Crossan expresses how the social processes of interpreting and integrating knowledge into shared mental models moved knowledge from something that happens

at the individual level to something that could ultimately be used at organisational level. The 4I framework has elements from both the behavioural and cognitive perspectives. The first part of this research in Case Study Organisation One, HealthCo, considers the how learning is perceived across the social cognitive and psychological perspectives across the four stages of the 4I framework as a guide described (Crossan et al, 1999; Crossan and Berdrow, 2003).

Figure 1 is a schematic depiction of the overlap between the four main perspectives and the placement of the 4I framework. In Figure One below, the Venn diagram depicts the overlaps between the cognitive and behavioural perspectives of organisational learning. I want to highlight the difficulty in separating each of the perspectives completely on their own. Discussion of Learning often embrace components form each of the perspectives.

Figure 1. Organisational learning Perspectives



In the studies of learning within organisations at the individual and group level, there are further delineations: types of learning, contextual factors, concepts of learning, content of learning, knowledge and understanding a process of improvement and levels of learning (Argyris and Schon, 1978; Argote, 1999; Fiol and Lyles, 1985; Huber, 1991). Contextual factors have been examined within the organisation such as: culture, strategy, structure and environment (Antonacoupolou, 2006; Crossan and Berdrow, 2003). The scope of this study is specifically narrowed to healthcare context because this context provides an opportunity to generate insights into organisations with large bureaucratic structures and systems. At the same time, Healthcare strives to be innovative and agile within in its team structure. Unique and complex relationships between manager and managed exist within this highly status driven and hierarchical industry culture, providing rich ground for organisational research (Carroll and Edmondson, 2002; Nutley and Davies, 2011).

The conceptual definitions of individual learning have focussed mostly on acquiring knowledge through experience and then exhibiting a change in behaviour (Argote, 1999; Skinner, 1950; Thorndike, 1908). For example, if I touch a hot stove and burn my fingers, at the next encounter, I am unlikely to touch the hot stove. Learning can be seen as an individual activity that leads to learning on behalf of an organisation (Kim, 1993; Dixon, 1999). An individual acquires new skills, values and norms. As these skills are passed from person to person, they become part of group learning or organisational learning (Argote, 1999). For this research it is important to highlight that these acquired skills, norms or routines have an element of tension. Kim (1993) uses know-how (the

acquisition of a skill) and know –why (conceptual understanding of the experiential learning). This mirrors the use of the tension between exploitation and exploration (Crossan et al 1999, Cyert and March 1963). It's important to reflect on this because the arguments about 'tension' help to explain why some learning passes through the organisation and some is discarded. The adoption of new routines is seen as the endpoint of the learning at either an individual or organisational level (Argyris and Schon, 1978; Miner and Mezias, 1996). This research is interested in the individual component of learning as it affects organisational level learning.

Learning in organisations is something done by individuals that encompasses information processing and decisions making (Brandi and Elkjaer 2011; Miner and Mezias, 1996) but it ultimately affects the whole of the organisation (Kim 1993, Dodgson 1999). "Individual learning outcomes can, by way of the individual acting on behalf of the organisation, be crystallised in organisational routines and values and become organisational learning" (Brandi and Elkjaer, 2011, p.41). "Organisational Learning is enhanced by individual learning but it goes way beyond that to systems in place for scanning the environment and using information to make better decisions, regardless of its source. What if this learning impacts the organizations as a whole? It is embedded in the way the organisation does its business and is shared throughout the organisation, even though this may not always be highly conscious. Such learning is not person dependent" (Watkins & Marsick, 1993, p. 156). Therefore, organisational learning encompasses all levels of learning; individual, group and organisation.

I have relied a number of sources for the definitions commonly used in Organisational Learning literature. These definitions draw out the ideas of learning as partly behavioural and partly cognitive and partly a shared mental model. Scholars use learning definitions to emphasis an aspect of learning to a particular set of circumstances in an organisation that they are studying. The rationale for including these definitions is that this study relies on more than one definition. In the course of the research, it became clear that the phenomenon I uncovered, embraced more than one theoretical framework. Thus, I have included these definitions to illustrate this point.

Table 1 represents the definitions that I have relied to interpret the learning taking place when analysing the empirical data. The definitions in Table 1 are taken from seminal works such Argyris and Schon (1978) to the very current framework (Crossan et al, 1999; 2011) and review articles (Schilling and Kluge, 2009). The wide range of these articles helps us to understand that learning is a complicated phenomenon that can be studied in different ways and that it is linked to systems (Bontis, Crossan and Hulland, 2002) in a similar way that Lean methodology and routines are linked with learning.

Table 1. Definitions of Organisational Learning

Author	Definitions
Argyris and Schon (1978 and 1996)	Organisational learning occurs when facts, procedures, myths of the organisation are embedded in members' minds and in the organisation's environment
Bontis, Crossan and Hulland (2002)	Organisational learning pertains to its systems, structures and procedures that

	are embedded in individual and group learning
Cangelosi and Dill (1965)	Adaption based upon the interaction of individual, group and organisation
Choo (1998)	Organisations have a continuous cycle of learning and adaptation.
Cook and Yanow (1993)	At the group level, learning is established with 'know-how' is cultivated and used for collective activities.
Crossan et al (1999)	Organisational learning is a means of strategic renewal. Renewal requires that organisations explore and learn in new ways whilst also exploiting what they already know and do.
Cyert and March (1963)	Adaption and adoption of new behaviours
Easterby-Smith (2011)	The process whereby the organisation acquires knowledge content
Fiol and Lyles (1985)	OL means the process of improving action through better knowledge and understanding
Garvin (2000)	Learning is a collective process that takes place in and through interaction with and between a number of people
Huber (1991)	Learning has taken place in an entity if a change in behaviour has occurred by processing available information
Leavitt and March (1988)	Organisations learn by encoding inferences from history into routines that guide behaviour
Nelson and Winter (1982)	Evolution of routines in an organisations
Senge (1990)	Learning is process of continual change and renewal, a way of reinventing oneself and the organisation
Simon (1991)	Organisations learn from their members and from integrating new members and their way of doing things into its structure
Shilling and Kluge (2009)	Organisationally collective learning is a process in which individual and group based experiences concerning the improvement of organisation performance and/or goals are transferred into organisational routines, processes and structure which turn into future learning

2.2.1. Current Framework of Organisational learning

Although this research study is not specifically modelled on the 4I framework, a large number of current research articles are based on this view of organisational learning. Therefore, I make note of the framework as a sub topic to the main part of research on the perception of how learning moves across an organisation.

The '4I Framework' (Crossan, Lane and White, 1999) proposes that learning moves across an organisation in an orderly and systematic way. This framework helps us in understanding the dichotomy of organisational learning between exploitative and explorative learning (Easterby-Smith and Armour 2003). At the same time, organizational routines have been an prominent component of Lean Methodology (Womack and Jones, 2010). Leavitt and March (1988) and March (1991) put forward the idea that learning was 'history dependent' or 'routine based'. Becker (2005) linked this use of routine to effectiveness and the 'means to accomplish work tasks'. Routines can help members to hold information about past decisions and thereby to use their [tacit] knowledge to perform new tasks (Hodgson and Knudsen, 2004). Thus routines can be a source of learning, akin to a 'stock' of learning (Bontis, Crossan and Hulland, 2002). Organisational learning is understood to take place in cycles with feedback loops from the individual levels to group levels and then institutionalised at the organisational level.

The following are definitions that have arisen from the development of the 4I framework in the last decade (Crossan and Berdrow, 2003, Crossan and Bapuji, 2004), Crossan and Apaydin, 2010). These definitions are used in Case Study One.

- Intuiting is "changing the way he or she thinks and is able to perceive new possibilities"
- Interpreting is "sharing and stabilising such insights through words and interactions with members of a group"
- Integrating happens when "members of the group confront structures that present the old order, adjusting to new structure"
- Institutionalising is the learning embedded in the organisation (Crossan et al, 2011, p 455).

Crossan et al (2011), describe OL as a multilevel phenomenon that needs to have a theory which " answers what, where, when, why and why not" (p 456). There has been limited empirical research showing how the learning is processed in an organisation (e.g. Crossan and Berdrow, 2003; Schilling and Kluge, 2009). Previous research has covered the integration of knowledge by focussing on knowledge transfer or embedding knowledge within the organisation (Argote and Ingram 2000; Hargadon & Fanelli, 2002; Lam, 2004, Lam & Lambermont–Ford, 2010). Other research has focused on institutionalisation as the end goal of learning that once achieved the cycle is complete. However, Crossan's problematic areas (1999, p 533) point out that without feedback the assimilation of new learning is made more difficult. Institutionalisation should be part of the cycle of feedback. People transfer their learning to the organisation through routines and accepted procedures of the organisations (Cyert & March, 1963; Feldman, 2000).

2.2.2. Natural Tensions in Organisational Learning

Organisational learning has many different forms and definition as previously discussed in section 2.2. 'Tension' is a concept that appears frequently in the literature because there is a natural 'tug of war' between what we know in the status quo and what we need to change. Organisations and Individuals have a tendency towards incremental change (Nevis, Dibella and Gould, 1997) instead of drastic change. Across different perspectives on OL, authors have described the 'tension' between explorative learning and exploitative learning (Cyert and March, 1963; Leavitt and March, 1988; Cangelosi and Dill, 1965). March (1991) pointed out that there was a 'trade off' in organisations in learning new routines. Organisations could 'exploit' exitisng ways of thinking and perhps change only incrementally or organisations could explore completely new ways of doing things. The gains in learning differ in each of the modes. 'Explorative' learning creates greater upheaval and may take longer to realise positive outcomes form this kind of learning. 'Exploitative' learning makes adjustments and to a familiar way of doing things. Both categories of leaning have their uses to organisations. The dilemma for many organisations is that the disruptive and perhaps unpredictable explorative learning tends to provide a steeper positive 'trajectory' of outcomes (Su, Li, Yang, Li, 2011).

In parallel, other authors have used different words to describe the tensions of learning completely new ideas (explorative) or incrementally changing older ideas (exploitative). For instance, Argyris and Schön (1978) described the single versus double loop learning while Fiol and Lyles (1985) used the words 'lower and higher order' learning. Following is a table that places the relevant terminology in comparison to each other.

Table 2 juxtaposes the definitions of 'exploration' and 'exploitation' in learning. I highlight this point because researchers describe learning as happening at different levels and intensities. In other words, some learning is considered to be incremental with smaller changes and other learning is deeper with exponential changes. Learning in healthcare is particular interested in both exploration of learning, i.e. bringing completely new protocols to treat diseases and the exploitation of learning, i.e. tweaking protocols to best fit the particular institution or situation.

Table 2 below shows side by side the parts of the defintiions that highlight the emphasis on the type of learning that is occurring. The exploration of learning is a 'higher order' type of learning. Individuals within organisations are challenging the assumptions and striving to change what is known about the procedures in their organisation (Edmondson & Bohmer, 2001). Double loop learning suggests that individuals within organisations continue ask questions about why an organisation is performing tasks in a particular way (Argyris and Schon, 1978). Perhaps Nutley and Davies (2011) have expressed the most salient pint of the difference between the adaptive nature of exploitation learning and the generative type of learning in exploration. The adaptive learning makes changes within systems of the type we generally see in medical care and explorative learning makes changes based in research and development. The explorative learning is generally scene as a major change to what individuals within organisations do.

Table 2 Comparison of learning 'tension' between exploration and exploitation

Expression of Definitions for 'tension' in learning		
Exploration	**Exploitation**	Authors
Intuit & Interpret	Integrate & Institute	Crossan, Lane and White (1999)

Double loop	Single loop	Argyris and Schön (1978, 1997)
Higher order	Lower level	Fiol & Lyles (1985) Edmondson and Bohmer (2001)
Organisational memory as reflection Information interpretation	Information distribution Information handling	Huber (1991)
Know why	Know how	Kim (1993)
Action orientation	Rules for task performance	Salancik and Pfeffer (1978)
Stimulus to action	Exercising skills	Nelson and Winter (1982)
Generative learning	Adaptive learning	Nutley and Davies (2011)

In the table above, the authors draw out the differences between exploring new learning and exploiting existing learning. This dichotomy relates to the 'pressure' or 'strain' between adopting a new idea/routine or rejecting it. Previous research groups (Fiol and Lyles, 1985; Weick and Wesltey, 1999; Crossan et al, 1999; Crossan and Berdrow, 2003) has attempted to explain how the learning tension is resolved in the organisation. This research focusses on uncovering the 'problematic areas' of organisational learning of what is being learned and implemented within the organisation.

This research study considers both the exploitative and explorative types of learning explanations to uncover the phenomenon of how learning is perceived in the two case study organisations (Argote, 2012; Argyris and Schon, 1997; Levitt and March 1988, Fiol and Lyles, 1985; Huber, 1991; March, 1991; Senge, 1991).

2.3 Lean Methodology Overview

Lean is both a method and a philosophy. It is driven by the idea that one can create an environment of customer/client value and eliminate nearly all waste (Womack and Jones, 2003). In healthcare, this idea translates into maximising value for the patient by reducing unnecessary procedures, waiting times, follow ups, and hospital visits (Ferlie, 2010). This aims to create a healthcare organisation that is efficient, low cost and achieves increased patient satisfaction as well as successful medical outcomes. A recent review of healthcare organisations in Canada using lean methodologies revealed a mixed results for reducing waste and certainly no conclusive evidence in

relation to increasing patient satisfaction (Lawal, Rotter, Kinsman, Sari, Harrison, Jeffrey, Kutz, Khan and Flynn, 2014).

At an operational level, lean limits exploration because it encourages the exploitation of routine for use in work reduction (Friel 2005). “Lean production should enable firms to boost their competitiveness by enabling them to substantively reduce production and development times, thereby increasing the speed at which firms react” Friel, 2005, p 51) Lean proponents believe that the methodology helps tap into employee empowerment. Lean gives the customer a ‘voice’ and employees can be self correcting gurus and build consensus around change from the individual and team level by defining and solving daily problems in the production process (Kim, et al 2006, Womack and Jones, 2010). Hospitals and Medical care traditionally depend on best practice. However, best medical practice depends heavily on good management practices and institutional norms. Under the crushing weight on sheer patient volume, hospitals find that best practice does not provide best care (Gawande 2009). Some Hospitals seem to be able to buck the trend and pursue programs that are not in accord with the particular institutional framework in which they are operating such as Virginia Mason or Intermountain Healthcare (Spear 2005).

Lean approaches ask organizations to learn that “there is an on-going continuous loop between the current state and future state maps through implementation and testing to develop the ideal way in which the process should flow toward the final product or service.” (Kim, Spahlinger, Kin, Billi 2006). Lean and organisational learning share parallel assumptions in their descriptions of how learning or change takes place (Flinchbaugh 2008). The evolution of the lean concept can be likened to OL. In general and for firms who are progressing across the four stage lean maturity (not to be confused with Crossan’s four stages) Stages of lean progression: Preparation (intuition), current state (interpretation), further state (integration), Implementation (institutionalisation). For this purpose, OL can be defined as “the processes for improving action through better knowledge and understanding” (Fiol and Lyles 1985, p 803).

Table 3 is a schematic of the Stages of the 4I framework compared to the stages of Lean Methodology. In the initial phase of this research study, the 4I framework seemed to be a comfortable fit in explaining how learning moved across an organisation. The ideas and concepts within the 4I framework are shared across the stages of Lean Methodology as shown in the table below.

Table 3. 4I Framework and Lean Methodology: a Comparison of Concepts

4I Framework	Lean Methodology
Intuit - preparing for change by deciphering information for oneself	Prep – laying the groundwork for lean to be used in an organisation (winning hearts and minds based on staff perceptions)
Interpret - shared understanding	Current state – shared conceptualisation

	of the organisation's current practices
Integrate – assimilating shared understanding into the group's perspective	Future state – an agreement amongst group members about how practices could be achieved
Institutionalise Embedding leaning	Implementation – embedding new practices

Lean as a philosophy within Healthcare has the same goal as Organisational learning. In a clinical setting, lean strives to promote continuous learning surrounding medical procedures and routines. "Clinical practice in the hospital setting is process rich and provides abundant opportunities for improvement of the delivery of patient care" using lean methodology (Kim, et al 2006, p 96). OL is concerned with adaption and change to meet the demands of production, innovation, efficiency. Learning cuts across all levels of the organisation down to individual and group level so that people have to learn new concepts, procedures and techniques. Organisations often look for methods that will help to uncover inefficiencies and to 'shortcut' their way to a productive workforce. Lean Methodology has been popular within manufacturing (Womack and Jones, 2010) to cut out waste and streamline work arrangements. It is seen as a key component to change in Healthcare (McCann et al 2012, Radnor et al, 2012). Supporters of lean see it as an opportunity to "create conditions for learning by allowing managers to evaluate the impact of improvements" (Lanteleme and Formoso, 2000, p 4). The interweaving of Lean and OL create conditions that enable systemic change and make learning possible (Flinchbaugh 2008). "The conditions" that enable learning are concerned with "procedures, rules, routines as well as abilities and attitudes" (Lantelme and Formoso, 2000 p 8). Learning is inherent in the description of Lean method and philosophy. Furthermore, "the way firms build, supplement and organise knowledge and routines around their activities and within their cultures and adapt and develop organisational efficiency by improving the use of the broad skills of the workforce" (Dodgson 1993, p 377). Lean focuses on empowering the individual to learn how to do each task as efficiently as possible and recognise when something needs to change. Lean principles have been embraced by some NHS facilities as embodying 'customer value', 'insights into flow', 'learning to see', i.e identifying waste and flaws, instil a lean culture (Proudlove et al 2008, p 29). Applying a methodology like lean in the 'messy, complex environment of the NHS" (p36) requires the organisation to be very structured in its approach especially in the roll out of the process and its guidance to individual employees.

In order for any particular organisational behaviour to become a routine, stability in the 'moulding practices' have to exist. The routines need to be consistent with the organisational goals and strategies either explicitly or implicitly (Becker et al, 2005). As a repository of organisational capabilities, "they pave the way for deliberate learning inside firms, thereby shaping the future development of the firm" (Becker et al, 2008; Winter, 2000; Zollo and Winter, 2002). "Even when there is considerable high level managerial control, there generally is a range of flexibility through which the routine can evolve without management being involved" (Becker et al 2005, p 776) This is the aspect of organisational learning that interests us. The evolution of the 'templates' and 'best practices' or canonical practices' that end up encouraging the preciseness of a roll out of new forms and procedures. Or perhaps the canonical practices are replicated time and again from one senior clinicians to more junior clinicians in their process of learning medical care. . The range of flexibility"

in applying routines "provides feedback to other organisation members indicating whether their efforts are, or are not, satisficing with respect to managerial objectives." (Becker et al 2005, p 779). In studying how lean is implemented it gives us insight into how individual learn new practices. Clinical practices are well documented and substantiated by external agencies such as NICE (National Institute for Health and care Excellence) and therefore provide a basis to observe change within the practices.

2.3.1. Lean as a Multilevel Learning Process

Lean methods emphasize the 'value added' functions within an organization whilst also reducing unnecessary procedures and waste. While many industries use Japanese Lean methods, such as in manufacturing and production, Healthcare aligns itself with a more basic set of lean principles and assumptions (Pettersen, 2009; see Womack and Jones, 2003). Lean implementation strategies have various terms or 'toolkits' that organizations choose to apply (Hines and Taylor, 2000) in order to affect change in worker routines. Generally, it is applied as a learning process and behavioral change (Ferlie and McNulty, 2002; Flinchbaugh, 2008). Lean has been used as an entire system process change (Naylor, Naim & Berry, 1999; Fleury and Fleury, 2001; Jones and Womack, 2002); and as part of a total quality improvement or best practice approach (Womack and Jones, 2003, Pettersen 2009; Hines, Holweg and Rich, 2004; Jones and Womack, 2002).

Lean is understood as a multilevel learning process that provides a foundation for change (Hines, Holweg and Rich, 2004). Lean also has similarities with organizational learning as a systematic process to embed new ways of working (Waring and Bishop 2010). Proponents of Lean see it as an opportunity to 'create conditions for learning by allowing managers to evaluate the impact of improvements' (Lanteleme and Formoso, 2000, p 4). However, Lean has been criticized for not engaging with employees and patients (Lawal et al 2014; Pettersen 2009; Tortella and Fogliatto 2014).

2.4. Lean Methodology in Healthcare

Healthcare organizations are continuously under pressure to reduce costs and increase patient throughput whilst also increasing patient satisfaction. Many different Lean interventions have been attempted by organizations; root cause- analysis, process efficiency, improvement in error detection, managing problem solving by standardization (Gawande, 2009; Pentland, et al 2012; Edmondson and Bohmer, 2001, Pisano, et al, 2001; Radnor, Holweg and Waring, 2012; Stan and Vermeulen, 2012;Ferlie, 2010). However, lean has not been as successful as the industry would have hoped. Learning Lean methods is sometimes seen as counter to the ethos of healthcare and bedside medicine. Recent reviews have criticized Lean implementation and the reported success stories (Mazzocato, Savage, Brommels, Aronnson and Thor, 2010; Proudlove, et al 2008).

The embedding of continuous improvement principles has proved difficult within a clinical setting (Mazzocatto et al 2010; Gawande, 2009; Edmondson, 2004; Berwick and Hackbarth, 2012; Waring and Bishop 2010). In part, this is because there are many competing interests and views within healthcare settings. For example, a radiology department and a surgical unit have different needs for

improvement that aren't necessarily solved by Lean implementation (Burgess and Radnor, 2013; Mazzocato et al 2010). Processes within patient care are more complex than in other industries and therefore Lean may not always be appropriate (Radnor, Holweg and Waring, 2012).

Hospitals are attracted to Lean principles for the promise of maximising value of activities and processes for the patient while also removing waste and improving quality and safety (Jones et al, 2006). Lean has gained some notoriety in the field of management research (Brandao de Souza, 2009, Taylor and Taylor, 2009, but it is still in its infancy in it application to the medical field (Radnor, Holweg and Waring, 2012). To date, a focus on the social aspects of Lean has lagged behind the exploration of implementation of lean methodology and the quantitative change in patient outcomes (Taylor et al, 2013). Challenges to the healthcare environment mean that more hospitals and health care organisations are turning to Lean methodologies to help improve their processes and realise operational benefits (Ben-Tovim et al, 2007; Dickson et al, 2009).

2.4.1. Routines and Healthcare

Routines can reflect the cumulative effect of individual learning but not necessarily a traceable route back to any one person (Nelson and Winter, 1982). Yet, the complex relationship between individual learning and organisational learning has been largely ignored in favour of large conceptual models and descriptive reviews (Dixon, 1999; Kim, 1993). There are times when the ideas and routines are adopted but the original reasons for it are lost to the organisation overall. In this way, individuals have influenced organisational routines and OL, but it is difficult to say exactly how this has happened (Leavitt and March, 1988). Routines represent a store of knowledge within an organisation and as such can be used as a basic unit of analysis (Feldman, 2000, Feldman and Pentland, 2003; Nelson and Winter, 1982).

Organisational learning occurs when routines are transformed through adaptation of behaviour or replacement of an old routine for a newer one (Cyert and March, 1963, Schulz, 2002; Leavitt and March, 1988). "Learning in routine occurs because people who engage in routines adjust their actions as they develop new understandings of what they can do and of the consequences of their actions" (Feldman, 2000, p 613). This exploitative aspect of learning is complemented by explorative learning process (Easterby-Smith & Lyles, 2011).

Routines help to develop organisations by forming rules, procedures and strategies through which they operate (Leavitt and March, 1988), at the same time employee's beliefs and cultural schemas contradict the formal routines and help to develop informal local processes.

The theoretical work on organisational routines arises from a diverse background of sociology, economics and psychology (references?). This may account for the differences in definition and research approach. Organisational routines, just as in organisational learning literature, have also been studied on different levels: organisational, group and individual level.

Increasingly organisations move to adopt new routines to increase efficiency especially in healthcare (Radnor et al, 2012; Nutley and Davies, 2011; Carroll and Edmondson, 2003). Routines form part of the fabric of the organisation's daily activities and the many interwoven activities create its overall operational strategies and performance measures. Routines help to hold the organisation 'together'

and hold the organisational actions in place even when there is labour turnover or loss of labour due to redundancy or attrition. Long after any one individual has left, the routine can 'hold' the learning for the next person or group that is hired.

One of the earliest definitions of routine was proposed by Stene (1940) "Organisational routine is that part of any organisation's activities which have become habitual because of repetition and which is regularly followed without specific directions or detailed supervision by any member of the organisation" (Stene, 1940, p 1129). The idea of repetition is important to learning and also to the healthcare context. "Repetition generally increases expertise" (Carroll and Edmondson, 2003, p 52). Yet repetition can also have undesirable and unintended results. "For example, doctors and nurses become like bored factory workers and newcomers can be disparaged for their lack of experience. If the experienced practitioner gets demotivated, reduces their interest in learning… organisations may fail to learn, and performance may suffer" (Carroll and Edmondson, 2003, p53).

Cyert and March (1963) used the underlying principles of standard operating procedure to develop the overall organisational routines. 'Organisational routines' are defined as repetitive activities or 'recognisable patterns of interdependent actions, carried out by multiple actors' (Feldman and Pentland, 2003, p 95). Such routines can guide organisational activities such as learning. "Organisational routines depend on connections, the stitching together of multiple participants and their actions to form a pattern that people recognise and talk about as a routine" (Feldman and Pentland, 2003, p 95)

The significance of routines is twofold both for the organisation's ability to change and to have some stability to increase efficiency and performance (Feldman and Pentland, 2003; Miner, 1991). In reviewing routines, we are able to uncover how organisations are able to accomplish their goals and improve their performance. It also allows us to begin to understand how knowledge or learning is transferred from the individual to the collective.

Indeed, some researchers (Nelson and Winter, 1982; Feldman 2000; Feldman and Pentland, 2003) have studied routines as part of the link between individual behaviour and the group. Routines help the members of an organisation to make sense of all the bombardment of information just as individuals use availability heuristics to shortcut information. Individually, heuristics allows us to make categories of information so that we don't have to learn things over and over again. Routines work in a similar way in that they help to save time and become more efficient. Problem solving becomes easier because members do not have to search for a new solution each time they face a difficulty. Becker (2005) linked this use of routine to effectiveness and the "means to accomplish work tasks". 'Habit is to the individual as routine is to the organisation' (Hodgson and Knudsen, 2004). Routines help members to hold information about past decisions thereby using their tacit knowledge to perform new tasks: "The idea that organisations remember a routine largely by exercising it is much like the idea that an individual remembers skills by exercising them" (Nelson and Winter, 1982, p 99). Routines are executed by some stimulus that triggers them into action.

Members of the organisation can call upon their repertoire of skills and routines to respond to stimuli. There are instances when the routine is established but does not take into account new stimuli or lack of old stimuli. As technology changes for many organisations, the old routines may

remain when they are no longer needed having become obsolete by technology. Yet the organisations 'hangs' onto them because of 'routine'. This has a great deal of importance for organisational learning. Routines can also help an organisation to maintain control over performance, the members and the strategy of an organisation (Nelson and Winter, 1982). Standards and procedures make member's behaviour more predictable. While Nelson and Winter (1982) refer to 'replication, Carroll and Edmondson (2003) refer to repetition, Nutley and Davies (2011) refer to structure.

Members of the organisations have a 'way of doing things' that suits the organisation's circumstance. These tacit routines become embedded in the organisation over time. When the routines are successful they tend to be replicated more frequently (Nelson and Winter 1982).

Medical education and medical duties rely on routines and the learning of routines. Routines are the "mechanisms that allow deployment of organisational knowledge in pursuit of organisational goals are learning routines" Nutley and Davies 2011, p37.) A member's behaviour can gain legitimacy through an organisational routine (Feldman and Pentland, 2003). This is a double-edged sword because such behaviours can also be destructive to the organisation as a whole. This parallels Crossan's explanation of the tension between exploration and exploitation in OL.

Table 4 contains select definitions that help to frame the importance of using a routine as an example of learning that one is able to map across the organisation. In the definitions below, routines are described as 'repetition' and a 'pattern of behaviour'. These repetitions are often learned from one individual to another within an organisation. Shared learning is a crucial concept to organisational learning and to understanding how routines might be changed by the sharing of knowledge from one person to another a done department to another. The definitions in Table 4 are a reminder that for the new behaviour or knowledge to be fully embedded within an organisations it needs to become part of the fabric of the routine work in the organisations.

Table 4. Definitions of Routine in the Literature

Author	Definition of Routine
Feldman and Pentland (2003)	An organisational routine is a repetitive pattern of interdependent actions involving multiple actors
Gersick and Hackman (1990)	Routines help actors to choose between alternate patterns of behaviour based on the stimulus of a situation

Gilbert (2005)	Routines are actions repeated so often that they have become embedded in the organisational structure
Leavitt and March (1988)	The generic term routines include the forms, rules, procedures, conventions strategies and technologies around which organisations are constructed and through which they operate
Nelson and Winter (1982)	A repetitive pattern of an activity in an entity, organisations or an individual skill or as an adjective to the smooth uneventful effectiveness of such an organisational or individual performance
Pentland and Feldman (2005)	Routines are repeated patterns of behaviour that are bound by rules and customs and that do not change very much from one interaction to another

2.5. Learning in Healthcare

This section calls attention to some of the challenges of learning in a healthcare environment. As noted in previous research (Carroll and Edmondson, 2002), healthcare can be viewed by individual workers as stringent and unforgiving. There are many issues surrounding the challenge to speak up (Nembhard and Edmondson, 2006), the fear of failure, the pressure to conform. The pedagogical framework for teaching medical professionals is much the same as it was 150 years ago (Berwick et al, 2008)

Several different threads of study comprise learning in healthcare. Some are concerned with learning curves (Pentland et al, 2012) or transfer of knowledge (Bohmer and Edmondson, 2001; Pisano et al, 2001). Others have been concerned with procedures and streamlining efficiency like lean processes (Radnor, Holweg and Waring, 2012; Stan and Vermeulen, 2012). Predominantly, medical education has been characterised by a one-way transfer of information embodied in 'best practices' that are outlined in standard medical texts or clinical practice guidelines. 'To achieve competence in this one-way transfer, physicians rely on repetition; indeed, learning is viewed as an inevitable consequence of repetition – as is implicit outcome hypothesis' (Bohmer and Edmondson, 2001, p 31). 'Rules of thumb' or norms are used for problem solving that place limitations on action outside of such norms ('Do what it takes to address the patient's needs, no more no less' quoted in Tucker and Edmondson, 2003). Individuals use routines to hide their problems (Carroll and Edmondson, 2002; Tucker and Edmondson, 2003).

Recent research has shown that although repetition is important, some learning leaps are made when there is a departure from the standard. "Learning was enhanced by departing from routine processes" (Stan and Vermuelen, 2012, p 13). When a medical practice engages in a high number of unusual or difficult cases, its subsequent performance rate was higher than those firms that did not

have unusual cases. (Haunschild and Sullivan, 2002; Stan and Vermuelen, 2012). Nutley and Davies (2011) stress the importance of looking beyond the 'adaptive' knowledge to more challenging scenarios to create generative learning in new paths of learning. "Healthcare organisations committed to organisational learning need to identify, understand and improve learning routines" (Nutley and Davies, 2011, p 37).

Thus, feedback and feed forward loops should be a top priority in healthcare so that subsequent cases are dealt with more comprehensively. Furthermore, "Experience in dealing only with standard cases, in contrast, will not lead to richer understanding and might even be a disincentive to trying out new solutions" (Stan and Vermuelen, 2012). Insights from disrupted routines need to be developed into processes that help with future cases (Pisano et al, 2001; Stan and Vermuelen, 2012). Radnor, Holweg and Waring (2012) underscore how difficult it is for underlying lessons to be learned in order to make system wide improvement. Small incremental changes are made and then often 're-made'; "those undertaking lean tasks seemed to be trapped in a continual repeating cycle of improvement, with the work returning to the status quo in between" (Radnor et al 2012, p369). There are instances when adopting ISO 9000 or other similar standard processes with the intent of boosting quality actually lead to decline in innovation, offsetting any potential short-term benefits (Benner and Tushman, 2002, 2003).

Innovation, change or intuition can be supressed for a number of reasons; psychology safety (Edmondson 2002), politicised environments (Lawrence et al, 2005), emotion (Vince and Saleem, 2004), and managerial attitudes (Antonacoupoulou, 2006). Some research within the healthcare context has focussed on the feedback as an integral part of learning and change. When errors are made and corrected, learning takes place first at the individual level and then sharing such knowledge at group and organisational levels. In a similar fashion to Crossan's work, Edmondson (2002) demonstrates the 'flows' of learning from different types of circumstances. 'Errors' were an easily solvable situation that could be avoided by proper information. A 'problem' was a more in-depth situation that might take a system wide change to solve.

Using the language of the major OL theorists, an error can be fixed immediately with single loop learning (Argyris and Schön, 1978), lower order learning (Fiol and Lyles, 1985), intuition to interpretation (Crossan et al 1999) but solutions could be improved upon if escalated to double loop learning (Argyris and Schön, 1978), higher order learning (Fiol & Lyles, 1985), integration to institutionalisation (Crossan et al, 1999). Complex problems involve a change to a routine or standard to be corrected (Stan and Vermuelen, 2012; tuck and Edmondson, 2003; Crossan and Berdrow, 2003).

Tucker and Edmondson (2003) give some concrete examples: a nurse who finds that she has no clean bed sheets on her ward simply takes them from another ward to solve her own problem. Other examples include more serious ones such as an error in medication delivery. In each case, the nurse engages a simple solution to solve the problem quickly. She does not move from interpretation to 'integrate' or 'institutionalise' the solution. "Effective action on such problems (solving first order but not second order problems) requires an understanding of systemic

interdependencies and leverage points, surfacing and challenging assumptions, communicating across groups and mobilising change" (Carroll and Edmondson, 2002, p52). Carroll and Edmondson believe that the routine can create an opportunity for people to disengage from problems. The solution to such learning stalemates is to confront the repetitiveness and routine: "Standardisation can also drive out innovation" (Carroll and Edmondson, 2002, p55). This links with the idea that institutionalisation can make it difficult to embrace new ideas (Crossan et al, 1999).

A key idea is to identify the precise moments when institutional routine conflicts with learning and break the cycle. "Healthcare organisations face particular barriers to systemic organisational learning from powerful status differences that inhibit open inquiry and collaborative learning" (Carroll and Edmondson, 2002, p 55). Routines influences employee behaviour such that they resist second order problem solving and rely on first order problem solving and theories in use.

Although organisational learning and routines have both been studied extensively, those studies have been achieved in isolation to each other. The present study's emphasis is on understanding "how" people view the processes of learning and change. For this reason, an inductive, interpretative method relying qualitative approach to data is appropriate (Yin, 2003).. Emerging theory often relies on an interpretive approach to elucidate the meaning of a phenomenon within an organisation (Corley and Gioia, 2004: Mento, Jones and Dirndorfer, 2002; Eisenhardt, 1989).

2.6. Chapter summary

The chapter provides an overview of the literature on organisational learning, the 4I framework, lean methodology, routines and learning in healthcare. Additionally, the concepts of 'tension' in learning between explorative and exploitative types of learning was discussed to underscore the struggle fo organisation to change their ways of working. Furthermore, The four lenses of organisational learning have been discussed for the importance and for understanding the overlap of their ideas. A central tenant underlying the theory of this thesis that learning is not just one thing. Researchers have highlighted different but symbiotic aspects to organisational learning describing it as social, cognitive and behavioural process (Argyris and Schon, 1978; Crossan, Lane and White, 1999; Fiol and Lyles, 1985; Huber, 1991). This chapter also provided a link between Lean principles, routines, the 4I framework and other learning theories.

CHAPTER 3

3. METHODOLOGY

3.1. Introduction

This chapter will detail the research philosophy and the methods deployed in this research project. That chapter begins with a brief introduction to the philosophical assumption that guide this research in terms of it ontological and epistemological foundations. Then follows a short description of the research sites and the data collection methods that were used namely; participant observation including field notes and diaries, semi structured interviews, corporate archival documents including some photographic documentation of organisational artefacts. A systemic inductive approach is used to analyse the collected data (Gioia et al, 2013; Langley, 1999). Finally, the steps taken regarding coding, interpreting and analysing the collected material are discussed. The chapter aconcludes with a statement on ethics.

The research approach to this study links closely with the type and nature of questions informed by the writings on qualitative inductive approaches (Ladge, Clair and Greenberg, 2012; Gioia, Corley and Hamilton 2013). The project explores individual perceptions and meaning of beliefs, attitudes & corporate documents as part of organisational life. Therefore, questions will be answered using a qualitative approach to the research.

An interpretivist view fits with the purpose of the study as I rely on comments and reflections on the actions of my 'co-workers'. One-to-one interviews, corporate archival documentation and correspondence between individuals such as emails, presentation, meeting discussions are used as data. The primary value of being a participant observer in a complex organizational context is that it reveals a great deal about the research setting and the people within it.

Because the study wanted to uncover how people learn, it seemed the natural way of collecting data and being to interpret the data in a meaningful way. The data was collected first from a US based healthcare organisation in which I was the Lead Training Consultant for a Leadership Academy. A participant cohort consisted of physicians and administrative managers gaining an internal leadership and lean certification. These individuals were on a 'learning journey' (as named by their organisation) so it was ideal for reporting how they felt about learning and what they were learning. The second study was conducted in a large urban hospital in the UK. Initially, I was given access as an external student; attending meetings and conducting interviews. After informally assisting their Project Management Team with some statistical clinical data analysis, I was given full access and an honorary contract. This meant I had the same access to databases, email systems, shared drives, and corporate material as any other staff member. This was a unique opportunity to observe from within. I immersed myself within this group by providing data analysis on internal projects as a professional courtesy. It is important to note that none of that data that is included in this document would be a breach of confidentiality.

The data gathering was a natural but systematic consequence of 'living' the experience. The data is rich and varied, from corporate PowerPoint presentations to field notes. The analysis involved gradual comparisons of the data with perception identified within notations. The aim was, as is the case with much qualitative management research, to move between the emerging themes and the data itself (Corley and Gioia, 2004; Gioia, Corley and Hamilton, 2013).

Previous research into the organisational learning has used a variety of methods. For example: ethnography (Berends, Boersma & Weggeman, 2003; Stevens and Dimitridas (2004); single and multi-case study approaches (Antonacoupoulou, 2006; Vince, 2001); hypothesis testing (Bontis, Crossan Hulland, 2002); and grounded theory (Edmondson, 2000; Kennedy 2006). Research that has focused on developing the Crossan, et al (1999) 4I Framework has used both single case study (Crossan and Berdrow, 2003) and multi case study (Cramer 2005) and ethnography (Lehesvirta, 2004). Longitudinal studies were developed to study OL by Zeitsma, Winn and Branzei (2002) and Stevens and Dimitridas (2004). Crossan aand Berdrow (2003) employed a single case study but used several types of data: archival data, corporate documents, participant observation of meetings and retrospective interviews to triangulate their analysis. Stevens and Dimitridas (2004) and Lehestriva (2004) conducted lengthy ethnographic studies to describe links between different levels of learning from individual to group. These studies suggest that organisational learning can be appropriately studied using both single case study and multi case study that use qualitative data analysis approaches from multiple source of data (Yin, 2011). Based on the methods employed in previous studies, a case study approach was used with two healthcare organisations.

3.2. Research Philosophy

This research is situated with a constructivist/ interpretivist paradigm (Guba and Lincoln, 2005; Charmaz, 2007). A paradigm is the nomological net that contains a set of beliefs used to guide a researcher's action (Denzin and Lincoln, 2005). "All social scientists approach their subject via explicit or implicit assumptions about the nature of the social world and the way in which it may be investigated" (Burrell and Morgan, 1979, xii). Researchers must make some assumptions about 'the reality being investigated' (ontology), the 'basis of knowledge' (epistemology), and the manner in which knowledge is obtained (methodology) (Burrell and Morgan, 1979, p 4 – 5). I am using a relativistic ontology. In other words, reality is constructed by the members of the organisation who produce and follow healthcare routines. Organisational members give meaning to the routines and procedures as they work within them.

Research Paradigms

The research questions for this study utilise a qualitative approach which is influenced by the social constructivist paradigm. the ontological and epistemological foundations belong to the constructivist/interpretivist approaches. Ontology is concerned with how the world is perceived whether there is an objective reality or a subjective one. Epistemology is concerned with the

knowledge that exits within it. How the nature of thesis knowledge is borne out. The scholarly writing on these topics use the definitions and arguments in different ways. For clarity, this research uses the Bryman (20120 definitions of epistemology and Ontology. In Bryman's (social research methods ; Interpretivism is defined in terms of contrasting epistemology to positivism. The choice of paradigms is driven by the type of research and the questions. To understand a particular phenomenon one must locate it within its own ontological and epistemological home. Ontology is described as the how we understand our existence of the world at large (Burrell and Morgan, 1982). Are we to accept that the world stands on its own as a factual objective place or do we see the world as a constructed reality for us to attach meaning to each phenomena? Epistemology is concerned with our knowledge of the world and how we come to know it. Each researcher must decide what is the most appropriate ontological and epistemological setting for their research. Eaterbsy –smith , et al (2012) dicusses how evne reachers have difficult agreeing on the relationship bewtene philosophy and methodlogy. Often these terms are used intercharngeabley and terms are not always clearly defined.

Ontology and epistemology are inextricably intertwined in a complicated relationship. They can cross boundaries (Cunliffe, 2003). In order to focus on the research to be undertaken for this thesis, it is important to frame the knowledge and beliefs of the researcher and how this would impact the how the research is conducted. Interestingly, this research is situated within a positivistic culture of science and medicine, the core element being researched is the perception of individuals. Therefore, it is relatively straightforward to use a constructivist, interpretivist approach.

Table 5 sets out a composite of the research ontological and epistemological positions. The nomenclature surrounding ontology and epistemology is not always consistent from text book to textbook. Therefore it is important to show which definition one is using.

Table 5 below positions positivism at one end of the ontology spectrum and constructivism at the other end. The present study aligns with the relativist's ideologies that the world is socially constructed. The table below supports the interpretative inductive methodological choices within the present study.

Table 5. Research Paradigms (Lincoln and Guba, 2005)

Item	**Positivism**	**Postpositivism**	**Critical Theory**	**Constructivism**
Ontology	Naïve realism "real" reality but apprehendible	Critical realism – an imperfect reality probabilistically apprehendible	Historical realism – shaped by social, political, cultural values,	Relativism – local and specific co---constructed realities
Epistemology	Dualist objectivist;	Modified dualist/objectivist; critical tradition	subjectivist; valued mediated findings	subjectivist; created findings

Methodology	Experimental/ chiefly quantitative methods	Modified experimental falsification of hypotheses	Uses semiotics and Foucauldian structures dialogic/'dialectic'	'text' interpretation/ hermeneutics/ dialectical

3.2.1. Ontology

Our ontological assumptions are concerned with the nature of reality. The philosophical assumptions underpinning ontology are on a continuum between realism and relativism. Theorists advocating a realist view argue that reality is objective and externally corroborated. Realists seek to define concrete structure, laws and processes (Collis and Hussey, 2009). These definitive edicts tend to be replaced only when there is new evidence to suggest a new laws of generalisations. This philosophical approach is favoured by the life or natural sciences. However there are some phenomena that are not easily explained by using an objective realist framework. In order to get underneath feelings and beliefs and a depth of complexity, one must turn to a more holistic view of the relativists.

Relativist ontology takes the view that the world is constructed through our own human interpretation. This philosophical view attempts to consider many different points of view in establishing the 'truth' of the situation (Buchanan, 2010). For relativists, truth is an agreement amongst the members of a particular group and relies on their consistent interpretation of meanings (Gabiel, 2008).

These ontological positions seem to be at complete odds with each other but they actually exist on a continuum, with many other research philosophies being espoused in between. For this particular research study, a relativist's view is the most appropriate.

Positivism is most commonly associated life sciences subjects such as medical studies accompanied by hypothesis testing for certainty, accuracy and generalisability in laws and principles (Crotty, 2010). Positivism seeks to understand the world in objective terms and verifiable facts. Easterby-Smith, et al (2012) describe positivism as viewing the social world as external and the research subject can be measured objectively through deductive methods establishing casualty and generalisation. A research study in a positivist's view would normally seek to large sample sizes and statistical methods to reach generalizable conclusions. Results are discussed using reliability and validity and levels of confidence that statistics. The desired goal in positivistic studies is to reach objective conclusions.

Constructivism is based on the idea that our reality is created through our perception of the world around us. (Berger and Luckman, 1969). It is in the 'meaning' that we create our reality. A common association with social constructionists is that researchers are influenced by this paradigm explore how language is used by research participants in understanding social realities and relationships within it. (Burr, 2003; Cunliffe, 2011). Cunliffe (2011) discusses the researcher interest in multiple interactions and reflections and as such accounts are written which focus on people and their perspectives. Cunliffe (2011) goes on to describe these account as being stories which include

feelings and reactions impacted by contextual meanings. Knowledge is socially constructed y people in their environment which impacts their acceptance and transmission of knowledge (Berger and Luckman, 1969, Burr, 2003).

3.2.2. Epistemology

Epistemology is what we accept as valid knowledge (Collis and Hussey, 2009). An epistemology is linked to our understanding, communication and validity of knowledge. As with ontology, epistemological debates also exist on a continuum ranging from objectivism to subjectivism to constructivism. The complexities that plague the writing on ontological perspectives are also present when discussing epistemologies.

Objectivism according to Crotty (1998) holds that reality exists outside of our consciousness and therefore can be study separately. Things exist or they do not without the influence of our perception or sensitivity. Cunliffe (2011) described objectivism's core assumption as "reality as a concrete structure" (p650). This means that investigations and methods can be independent of the researcher. Knowledge can then be theorised though causal linkages, rules, laws; and dependent on scrupulously following correct procedures; reliability and validity of the findings can be established. The critical aspect of assuming the mantle of objectivism is positivistic notion that knowledge exists independently to be arrived 'at' by experimentation. This approach strives for research to as objectively as possible uncover the truth given the evidence at that particular juncture. The 'truth' can be amended as new evidence arrives and old assumptions are discarded Crotty, 1998).

Interpretivism is often seen as the polar opposite to positivism and objecitivism. In this paradigm, researchers acknowledge that 'facts' are 'value-laden' and can be biased by perspective. It is assumed that knowledge is subjectively created and needs to be understood from the point of view of the individuals in organisations (Saunders et al 2009). Interpretivists look for understanding in the meanings ascribed to data. Patterns and theories are developed for the purpose of understanding not for the inclusion in a 'law'. Interpretivism produces 'rich' qualitative data (Collis and Hussey, 2009) as it uncovers the complexities of human interaction in everyday experiences.

OL draws from a wide variety of social science disciplines and as such there are many approaches to research design (Li et al, 2009). Over the last two decades a pattern of use has developed separately in the US and UK. The US largely uses quantitative methods and the UK favours qualitative methods (Li et al, 2009; Easterby-Smith, 2011). While quantitative methods may be appropriate for generalisability, it does not always help to answer the questions behind actions. Qualitative methods help to give meaning and add new dimensions to research (Bartunek and Seo, 2002). "There needs to be a balance between qualitative and quantitative" using each method where it is justified by the study itself (Li et al 2009, p 444). This study requires an inductive comparative approach to uncover meaning behind actions (Charmaz, 2006; Charmaz and Henwood 2007). A constant comparison method is used to "examine all possible theoretical explanation for their empirical findings" (Bryant and Charmaz, 2007, p 2).

The aim of this study is to understand how learning is experienced by people within two healthcare organisations. Therefore, the research employs an interpretivist approach specifically in order to elicit those meanings and descriptions, and to align with the specific research question being investigated (Bryman, 2008). Popper and Lipshitz (1988) argue for the use of a field setting to understand organisational learning with research methods that can assess the effects of an organisational context. In this research, I am using a hospital setting to understand how healthcare

workers who are learning and implementing lean into their medical routines describe this learning. Research can be seen as a 'living thing' (reference?) and adaptable to the field setting and the research question and topic of the study.

3.2.3. Study Design

A discussion of research study design and relationship to the current project, one must provide clarity over terminology used in terms of designing and conducting research. Research design and methodology are often taken to have the same meaning but there are subtle differences. For the purposes of this thesis, the design of the study sits within qualitative research and the methods employed to investigate the topic follows a general case study design. There are two case studies that were completed sequentially but not used as part of comparative design. The first case study for HealthCo was much mire narrow in tis focus. The second case study at St. Lydda's was broader in terms of the data collection and deeper in its analysis of the complexities of organisational learning.

The qualitative methods used in this research include participation observations, semi –structured interviews, document analysis of corporate archival material and photographic evidence from corporate artefacts. Each of the data collection methods is discussed in turn in chapter section 3.4.

Previous research into the processes of organisational learning have included a variety of methodologies; for example: quantitative (Bontis et al, 2002), single case study (Crossan and Berdrow, 2003) and longitudinal case study (Zietsma et al, 2002). These studies suggest that 4I organisational learning processes can be appropriately studied using qualitative data analysis approaches. Rich qualitative data provided deeper understanding to the underlying issues and perceptions of individuals.

Case Study design

This research has been conducted in an exploratory, descriptive and explanatory manner in order to uncover how individual in general experience the learning during lean implementation (RQ1) and further how do individuals perceive the process of learning under these conditions (RQ2). These are linked to exploratory aspect of the design. An explanatory case study would generate some idea about perceptions, beliefs and attitudes towards the processes of learning (RQ3) help to create greater clarity in what occurs in learning during a lean implementation. The questions in the study that pertain to how learning (RQ4) moves across the organisation aligns with the descriptive manner of the case study design. Description can help consolidate what we know about a theoretical framework and help to clarify previous descriptions and classifications. Finally, exploring the experiences how lean influenced learning speaks to the exploratory manner of the research. Yin (2011) advocates for case study for its richness in the variety of evidence it can achieve. Besides observation and interviews, the researcher has access to corporate documents, databases, and corporate artefacts. Having these different types of data offered additional triangulation to enhance reliability and validity of the research. It has helped to add to the descriptive element in determining meanings behind the statements and perception of the clinical individuals involved in learning new techniques and procedures under Lean implementation.

Case Studies can be deployed as single organisation case studies or comparative studies between organisations (Eisenhardt, 1998; Yin, 2011). This research is iterative using two case studies over time to be revelatory, encompassing exploratory, descriptive and explanatory in how learning is affected during Lean implementation. In this research, there were multiple opportunities to delineate the unit of analysis. Within a single case study, units of analysis dependent on the research question. The might include groups or the evaluation of project or staff roles. The

interaction between staff could also be a unit of analysis. This research chose to observe the phenomenon of the perception of what is/has been learned during a Lean implementation phase of a healthcare organisation. Its purpose is to be descriptive and explanatory in delving deeper into these of barriers to learning under the Lean lens.

This research uses an adapted Eisenhardt (1989) case study framework. This framework is appropriate as it allows for credibility, dependability and confirmability through the utilisation of multiple source of data for triangulation which then can allow for discussion of consistency (Miller, 2008). The focus of this research was on a single topic of learning under Lean conditions which lends itself to case study design. The Initial sampling was within a single setting of healthcare but with the flexibility to explore different levels of interaction; e.g. individual to individual, individual to group or group to organisation. In this research, observations made at individual, group and organisational level allowed for triangulation of the data. Understanding the different perspectives of senior managers versus the 'front line' clinical workers of a single event such as the lean launch event help to create the emergent themes within the data. The multiple viewpoints supports the credibility of the themes and forms the basis of improving or creating theoretical constructs. Theoretical saturation can be achieved when multiple examples lead the researcher to the same or similar constructs in the themes.

The present study represents two case studies which were conducted sequentially. Study One was completed in a US healthcare organisation. This reviewed the learning journals of a cohort of clinicians as they progressed through a nine-month training course called Leadership Academy. In addition, interviews and visits to their medical sites were undertaken as part of data collection. A range of organisational materials were analysed in addition to the interviews and learning journals excerpts.

Study Two was conducted at a large urban hospital in the UK. The hospital was undergoing a change to use lean methods to improve efficiency. Several overlapping improvement projects were in process in the organisation. Examples were taken from different projects from this time period. However, the majority of the examples are from the Acute Coronary Syndrome Pathway. The material relates to the experiences of employees separate from any patient data.

3.3. Data Sampling

Sampling Approach

The sampling challenge for researchers involves the choice of selection for specific reasons; i.e. which units and why. The research questions drive the choice of data sample selection. It I also important that the units provide the "broadest range of information and perspective son the study" (Kuzel, 1992, p37). In this regard, individuals who may hold opposing views within your study topic should be chosen to attempt to reach a balanced view (Yin, 2010). Therefore on can avoid bias in confirmation of one's own preconceived notion on the research topic.

In case study research, purposive sampling is often used to have a deliberate method of choosing participants. It produces relevant data because the participants have been chosen for a specific attribute or some experience they have undergone. The Attribute or the Experience is explore within the relevant theoretical framework and analysed Os that some conclusions can be drawn about the chosen topic. This research for this thesis used purposive sampling in order to gain an understanding of healthcare workers learning under Lean conditions. The participants were chosen

for their involvement in the Lean projects. For example, the members of the Lean service improvement team in the Acute Coronary syndrome pathway were interviewed. In addition, activities relating to the implementation of lean were observed such as: project meetings, Public presentations, Launch meetings, lessons learned presentation meetings, network meetings and training session.

3.3.1. Access to the field

Qualitative studies of the type described in this thesis involve field work in a real life situations and observing people in specific settings. The 'human events' become a part of the study. Therefore choosing where and how the research is conducted is of utmost importance. One of the biggest obstacles to qualitative research is gaining 'access to the field' where one would ike to research (Patton, 2002). Access should not be viewed as an 'event' but more of a 'process' (Yin, 2011). Thinking of access as an on –time event massively over simplifies things (Yin, 2011, p114). Once access is gained, the research may be constrained by a gatekeeper within the real life setting. This can influence the substance of study. The researcher must be careful remain sensitive to the 'implications' of how a site was accessed and 'pleasing' all the gatekeepers at the research site. The limitations of field research are far outweighed by the richness of the data that can be collected.

The research for this thesis involved working directly in the field. The field setting, using Yin's (2011) definition, was a work group of healthcare workers undergoing lean implementation at their institutions. This provided ample opportunities for data collection through interviews, participant observation and review of corporate documentation whilst in the field.

My professional life spanned a number of organisations involved in healthcare in both the public and private sector. I stated my career as support staff in a research lab in large US research hospital. My research department had both clinical and basic science research labs. I have done everything from weigh the adrenal glands of culled rats (a study on smooth muscle cells) to typing DNA sequences for ordering genetically modified mice to taking minutes and facilitating lab meetings. My more recent professional experience within the last 10 years, as a Learning and Development Specialist, brought me into contact with clinicians involved in improvement projects for hospitals and other healthcare settings. Thus, I had a ready network of contacts to call upon for access to field settings. My initial contact for Case Study One was through my involvement as part of a Leadership Academy for a Healthcare consortium in North-eastern United States. A Healthcare consortium is a cooperative of healthcare facilities that range from GP surgeries to hospital settings. For Case study one, I was employed as a trainer and consultant but also knew many of the medical professionals as former colleagues. Constant dialogue between the employees and former colleagues was used to engage in open and frank discussion about the interpretation of the data.

The clinicians and Senior managers from these groups in Case Study One were participating in a leadership academy to learn new ways of managing their staff and improve efficiencies through Lean in their sites. Some of the sites were undergoing Lean transformation which provided additional opportunities to gain access to the field. Case Study one was completed for my transfer viva and once that was successfully completed, I searched for a UK site. One of the US clinicians from Case Study One introduced me to an American in the UK who worked for the King's fund. Through that contact, I was referred to St. Lydda's (the pseudonym given to the London Hospital for Case Study Two). St. Lydda's was keen to draw on my professional expertise whilst at the same time allowing me access to their Service Improvement Project.

In Case Study two, I was under an honorary contract. So, although I was not a paid employee, I had open access to all information and meetings. This created a further dilemma in relation to the danger of becoming too close to the information. However, the credibility of the data can be supported by the use of different sources of data, and their triangulation within the analysis. In addition, I fed back information about the study to the service improvement team who were implementing the learning of lean methods. The Feedback was given in the form of a report and presentation to the staff so that there could be open dialogue on everything from method of collection, the sampling, the interpretations. Some new information came to light in these discussions that initiated the re-reading of field notes and re-coding of examples.

3.3.2. Organisation from Case Study One

The first study was conducted within a large US healthcare system in Northeastern United States which I have given the pseudonym 'Health Co.'. it is a non-profit healthcare organisation which delivers a system of connected care. It has 34 clinical locations, 50 specialities and 900 physicians. It covers 740,000 patient in America's northeast region. The healthcare system had both hospital, GP sites, speciality sites and administrative offices in a major US city. Access was granted through professional contacts and former colleagues to physician and administrative managers who were taking part in a Leadership Academy. The idea of the research was driven partly by the organisation's desire to understand what learning was being transferred back to the workplace after the Leadership Academy training (including lean methods). The scope of the project grew through discussion with the organisation and the progression of my own academic studies.

3.3.3 Organisation from Case Study Two

The second site was a large urban hospital. The hospital, which I have given the pseudonym, 'St. Lydda's' is located in southern England employs over 8000 staff. It is one of the UK's largest teaching hospitals. It trains medical students and carries out medical research. It is a foundation hospital providing specialist care alongside a large number of services to the community. They have recently embarked on a programme of lean transformation using a well-known consulting firm, CG to assist in training and guiding leaders' teams through the elements of lean methods. Four Rapid Change Pathways were chosen (RCPs) and another Integrated Care pathway (ICP) to form part of this study.

Context to Organisation in Case Study Two

In order to fully understand the issues and struggles at St. Lydda's, I want to give some background and context to my experience and subsequent reposting of the empirical evidence. When I first began attending meetings at St. Lydda's the goal of the projects was represented as definitive and unchanging. Staff members talked about the lean project as a solid fixed feature. Over time, I began to understand that the stated public goals of senior management were not as fixed in the devolved departments and ward projects. The disappearance of senior management left individual clinical managers to be able to change or alter the project definitions and the implementation of lean. In the early days of the projects, top leaders were involved in the meetings. As the months wore on, senior leaders dropped out and the membership of meetings began to look more clinical than executive. About 6 months after the start of the whole programme, a clinical leader or 'clinical champion' was appointed. The clinical champion knew very little about lean and its principles. To further complicate matters, a subtle shift in reporting style became evident. The focus of each individual project started to look like individual research projects, not overall improvement structures. Below is a schematic of how I viewed the changes overall within the organisation.

Figures 2a and 2b are a visual depiction of my understanding of the context of the change taking place at an organisational level for Case Study Two.

Figure 2a Timeline of Project changes in Case Study Two

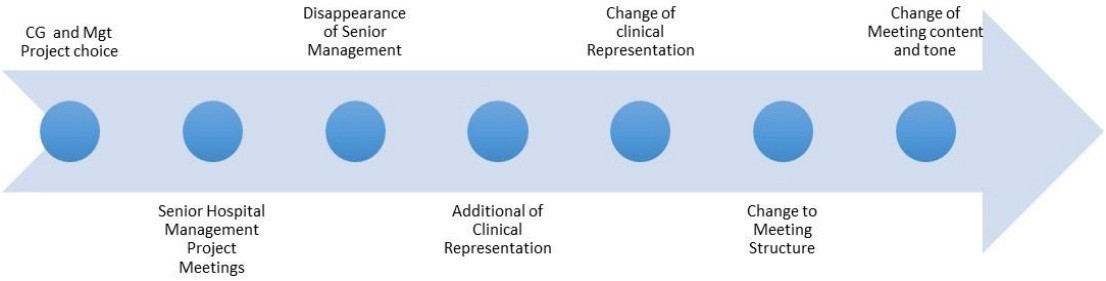
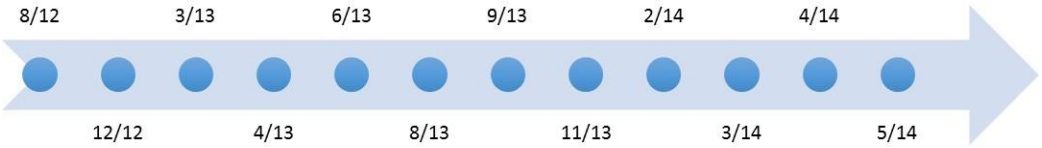


Figure 2b Timeline of Changing Goals for Case Study Two



Choosing ICP projects	1st ACS meeting CEO COO Chief Nurse Head SI CG rep	Change in Membership 4th ACS Meeting No senior leaders	Clinical Head of Improvement introduced to team	Change in reporting style Members changed	Public presentation of Achievements	Change in Action points and emphasis Members changed	Pro-forma discussions begin	Researchers report back to SI Board	Change in reporting to Action Logs	e-pathway becomes goal	Hand over to BAU

I've drawn the timelines in figure 2a and 2b to give a frame of reference for the reader for the changes that were occurring within St. Lydda's, in Case study Two. The data collection in Case Study Two is as much about understanding its content and meaning but also the relevance to changes in relative terms. For instance, in explaining the theme of Managerial control (section 5.3.1), the concept of meeting membership is discussed. The empirical evidence provided is about who was attending meetings and when they were attending. The importance of who 'fell off' the meeting list and when that happened helped to illustrate why knowledge was not being shared.

The next important organisational component to understand is the change in goals (Figure 2b above). This is also explored in the data analysis. From my perspective as a researcher, it was important to appreciate that as I was collecting data, the organisation was changing its focus on the lean programme. This is likely to be one reason why organisation members found it difficult to learn. This idea is discussed and developed in the data analysis section. As I reviewed meeting notes, action items and agendas; a pattern emerged that the Consulting Group (CG) was responsible for initiating most of the projects. The CG's financial analysis drove which Integrated Care Pathways and Rapid change Projects were adopted and which were discarded and when this happened. The

timeline shows a migration of goal setting and ideas and influences across the programme. Although, I have not touched on time as a factor in the PhD it provides a frame of reference for the confusion and angst that surrounded this learning environment.

At the time of the study, St. Lydda's was undergoing its transformation to Foundation trust status. St. Lydda's was offered 'free help' by a Major Consulting Group (CG). CG had worked in many different industries but was clearly trying to step into the medical arena. CG were most notable for their contribution to manufacturing industries and their expertise in Lean. CG had a medical professional on their team assigned to St. Lydda's. in an initial interview with the Chief Executive and chief Nurse of St. Lydda's it was revealed that The senior executive team allowed CG 'control over major decisions in the early stages of the implementation of lean project'. Part of the reasoning for my presence in the host institution was to the review whether the Consulting Group was a helpful and cost effective influence into the changes being implemented at St. Lydda's.

Hospital senior leaders were concerned with producing a lean programme that should have the greatest impact on the diseases with highest cost value to the hospital. There were suggestions from the clinical group about what they thought were the best options for patient care and for the change needed to the system. However, it was CG who decided what the hospital would focus on.

3.4. Data collection Methods

Qualitative research is often linked to an interpretivist paradigm based in historical custom and practice of linking the ontologies and methodologies (Bryman and Bell, 2011, Easterby-Smith et al, 2012). A qualitative research strategy is designed to 'human element' within a given research topic by understanding how individuals experience their world (Given, 2008). The present research study topic lends itself to using qualitative design methods.

The benefits of qualitative research are numerous and popular across many different disciplines in social research. Qualitative research has grown in popularity in healthcare research (Flick et al, 2004) for its ability to gain deeper understanding of the complexities of patterns and relationships/ Unlike other research strategies, qualitative research has a freer rein to include many events and types of data within research environment (Yin, 2011). The suitability of qualitative research is linked to a flexibility of inquiry employing a variety of methods: interviews, observations, focus groups, archival research, oral histories and content analysis (Preissle, 2011). The methods and analysis used are not distinct to this research strategy as multiple methods and analysis can be employed in varying degrees. Qualitative research is commonly carried within the participants setting and it is up to the researcher to interpret meaning and highlight the complexity of the field under study (Creswell, 2009).

The perceived limitations of qualitative research appear to be enmeshed in debate over paradigms with positivist research (quantitative) generating truths and science and interpretivist (qualitative) research being associated with narratives and participant stories which may not carry the same 'truth' impact (Denzin and Lincoln, 2011). These views impact on how generalisability, reliability and validity are perceived in qualitative work in demonstrating the objectivity of the research.

This research study is a qualitative study that depends on in-depth, detail rich data to understand how organisational members describe the process routine gets embedded into the organisations (Denzin and Lincoln, 2005). "Qualitative inquiry is highly appropriate in studying process because depicting process requires detailed description" (Patton, 1990 p 95). This study requires an

inductive, comparative approach (Charmaz, 2006; Charmaz and Henwood, 2007) . I am not using an inductive method to create new theory, but instead to stay close to the data and to look for "all possible theoretical explanations for the data forming hypotheses for each possible explanation, checking them empirically by examining data, and pursuing the plausible explanation" (Charmaz, 2006, p 188).

The data for this research has been generated from 77 semi-structured interviews (Johnson, 2002; Kvale, 1996), corporate archival documentation including: 10 project meeting agendas and minutes, 144 emails, 30 action logs, 14 executive reports (Bowen, 2009; Welch, 2000), visual material including 9 photographs and 31 screen shots (Stanczak, 2007; Yin, 2011), field notes (Yin, 2011), a reflexive diary (Alazewski, 2006; Haynes, 2012) and prolonged engagement with the research institutions (Yin, 2011; Lincoln and Guba, 1985). The broad range of data collection methods were selected to provide methodological triangulation and because of their natural fit with the philosophical underpinning of the research question.

Table 6 provides an overview of the types of materials gathered for this research project. The studies included a very wide variety of source materials. Table 6 provides a brief description of the type of source and the reasons is was used.

Table 6 Source documents used in data collection

Data Type	Numbers	Collection Timeframe	Purpose	Reasons for Use
Field notes from Participant Observation	~50 A4 pages	April 2014 – October 2014	Recording of interactions between researcher and other staff members	Reflections on working in the institution – primary data
Work Diary	~100 page A5 leather bound diary	April 2014 – October 2014	Recording of interactions between researcher and other staff members	Data examples for another study
SLaM (service level agreement measurement "one version of the truth"	In patient data (admit date, discharge, diagnosis codes, etc)	Feb 2013 – March 2014	Data analysis for the host institution	Information for the host institution not for use in the PhD or publication
Interviews	36 individuals for ACS	Feb 2013 – March 2014	Primary data	Primary data

	project			
Surveys	Mixed method snapshot surveys	Beginning July 2014 'the perfect week'	Information for the host institution	Secondary data
Institutional data				
Reports	14 reports between 2 and 4 pages	April 2014 – October 2014	Secondary data	Secondary data
Action Logs	~30 action logs (initial version counted)	Feb 2013 – March 2014	Summaries of the actions taken by staff members	Show progression of member's understanding of Lean learning
Power point Presentations	10 PPT (5 additional presentations from the launch day)	Feb 2013 – March 2014	Secondary data	Show progression of member's understanding of Lean learning
Meeting agendas &Minutes	10 Project meeting agenda and subsequent minutes	Feb 2013 – March 2014	Secondary data	Show progression of member's understanding of Lean learning
Photographs	5	Feb 2013 – March 2014	Illustrations of institutional action	Show progression of member's understanding of Lean learning
Emails	144 emails	Feb 2013 – March 2014	primary data	Show progression of member's understanding of Lean learning

Methodological triangulation helps to provide a fuller picture of the phenomena being studied. Triangulation helps to establish the credibility and authenticity of the data itself and later the

interpretative analysis. It builds trustworthiness not by any specific procedure but by creating internal integrity in the research study (Yin, 2011). The triangulation creates 'converging lines of inquiry' about the research and the assumptions of the researcher (Yin, 2011). This was of particular significance in this study because some of the emergent themes describe the contradictions in the organisation. The only way to illustrate this was to provide evidence something being said in an interview that may have contradicted what was seen in a photograph of a bulletin board or what was recorded in a report. The researcher's own assumptions and thoughts about the interpretation of these organisational contradictions then were part of the journey of reflexivity. An overall methodology was created from the five different methods intersecting to examine all the possibilities of how individuals perceived organisational learning particularly under Lean implementation.

3.4.1. Semi structured Interviews

The interview is one of the most common methods in qualitative research. Even so, interviews can vary greatly in their type and form. Interviews are socially interactive with the researcher and the participant playing active roles in creating socially constructed understanding and knowledge of the research topic (Holstein and Gubrium, 1997). The goal is to understand from the interviewees' perspective the issues within of the research topic. In order "to meet this goal, the research interviews will generally have the following characteristics: a low degree of structure imposed by the interviewer, a preponderance of open questions; a focus on specific situations and actions' (Kvale, 1983, p 176). The researcher needs to stay true to the interviewees interpretation of the research topic rather than a general opinion.

A relationship between the interviewer and the interviewee is a key component of a qualitative reach interview. The researcher's main concern is to extract an accurate depiction of events, beliefs, attitudes of the research topic. There are two ways of approaching this: one is to minimise the impact of a personal relationship between interviewee and interviewer and the other is to make a feature of that closeness of that relationship. The special relationship between researcher and interviewee can elicit deeper information than if the researcher has arrived with recording and structured questions.

Semi-structured interviews were adopted for this research as should enable key areas to be discussed and allow for flexibility where interviewees would discuss their own experiences which could allow for insights to emerge. Using the methods suggested by Kumar, Stern and Anderson (1993), interviewees from each of the RCPs and ICP were chosen to take part in semi structured interviews. In total between the two studies about 80 interviews were undertaken. Some of those interviews were follow-ups to the original interview. Not all interviews were recorded (at the wishes of participants). The questions covered how employees understood the learning that had taken place, from the initial ideas through to how it was finally embedded. The questions were adapted from the work of Bontis, Crossan and Hulland (2002). Interviewees were given a wide latitude to discuss their own ideas, issues and perceptions about the learning of the new lean routines. A copy of the interview consent form used in the research is attached in the appendices.

Table 7 gives the details for the participants in Case Study One. The cover a range of posts within the organisations so that a holistic view of perceptions could be gathered. There is a bias towards clinicians as they form the greater number of employees in the organisation and that the case study is about healthcare.

Table 7 Organisational Participant Demographics for Case Study One

Participant Demographic characteristics	
Organisational tenure	Mean of 8 years, mode 7 years, Range 1-27 years
Race	84% Caucasian 4% East Asian 3% Asian 7% Afro-Caribbean 2% Other
Organisational Level	67% Clinical 31% Admin/Managerial with clinical background 2% Admin with no clinical background
Organisational work role	Clinical Examples: Nurse, Nurse Practitioner, Physician Assistant, Midwife, Physician Clinical Managerial examples: Nurse Leader, Physician Executive (Chief or Head of Department) Admin or Non Clinical Managerial examples: IT Project Manager , Practice Manager, Operations Manager, Finance Managers
Industry Specialities	Internal medicine (General Medicine) Obstetrics Paediatrics Surgeon IT/Process Improvement/Operations Behavioural Medicine Dermatology Pharmacy Pulmonary
Lean Introduction	Mean 1.5 years range 0 – 3 years

These participants represented individuals who were involved in the lean implementation and could speak knowledgeably about the learning conditions under Lean.

Table 8 shows the number and timing of interviews for Case Study One. They cover time period of pre and post implementation of Lean transformation.

Table 8 Quantitative Details of Interview Data for Case Study One

Interview Phase				
Participant and Hierarchal Position	Pre Lean Implementation	During Implementation	Post Implementation	Total
Chief Medical Officer	1		1	2
Executive Director of Clinical Learning	2	2	2	6
Interviews with Learning Cohort				
Nurse Manager		1	1	2
Nurse Practitioner	1 a	1 b	1 c	3
Pharmacist		1	1	2
Lead Nurse	1	1	1	3
Physician Executive	1	1	1	3
It Project Manager		1	1	2
Practice Manager (1)	1	2	1	4
Practice Manager (2)	1	2	1	4
Practice Manager (3)	1	2	2	6
				37

Table 9 depicts the demographics of interviewees for Case Study Two showing a range of individuals who were involve in the implementation of lean. The choice of sampling is explained into Methodology chapter section 3.3.

Table 9 Demographics for Interviewees in Case Study Two

Participant Demographic characteristics	
Organisational tenure	Mean of 6 years, mode 11 years, Range 0.3 -28 years
Race	88% Caucasian 1% East Asian 1.5% Asian 7% Afro-Caribbean 1% Other
Organisational Level	84% Clinical 11% Admin/Managerial with clinical background 5% Admin with no clinical background
Organisational work role	Clinical Examples: Nurse, Nurse Practitioner, Physician Assistant, Midwife, Physician Clinical Managerial examples: Nurse Leader, Physician Executive (Chief or Head of Department) Admin or Non Clinical Managerial examples: IT Project Manager , Practice Manager, Operations Manager, Finance Managers

Specialities	Cardiology Internal medicine (General Medicine) Obstetrics Paediatrics Surgeon IT/Process Improvement/Operations Behavioural Medicine
Lean Introduction	Mean .7 years range 0 – 2 years

Table 10 shows the participants and timing of interviews for Case Study Two. The interviews were of differing lengths and many of them were recorded by hand written notes. St. Lydda's staff in Case Study Two, on the whole, preferred not to be recorded.

Table 10 Quantitative details for interviews data for Case Study Two

Interview Phase				
Participant and Hierarchal Position	Pre Lean Implementation	During Implementation	Post Implementation	Total
Chief Executive Officer	1			1
Executive Director of Clinical Learning	1		1	2
Interviews with Project Members				
Nurse Manager		1	1	2
Nurse Practitioner	1		1	2
Lead Nurse	1	1	1	3
Clinical Executives (13)	1 x13	1 x 6	1x 4	24
It Project Manager (2)	1	1	1	6

				40

3.4.2. Participant Observation

Qualitative studies are often associated with participant observation, especially in the field of anthropology and sociology. In fact, fieldwork is often synonymous with participant observation (Anderson-Levitt, 2006). Participant observation 'emphasises close, intimate, active involvement' (Emerson, Fretz and Shaw, 2001, p17-18). There is 'relative emphasis' on participation and observation, this can produce a number of variants: (1) being a participant only, (2) being a participant who also observes, (3) being an observer who also participates, (4) being an observer only (Yin, 2011, p 143). The usual practice is to fall somewhere between (2) and (3) that is 'having some participation and some observation' (Yin, 2011). In participant observations, researchers are fully immersed into the field (Angrosino and Rosenberg, 2011). Thus the researcher becomes an 'instrument' of the research. In these real-life situations, the five sense 'become the main modalities' and a limitation to measurement will be the ability to recall and remember actions when writing up field notes and recording events, behaviours an actions (Yin, 2011, p144).

As part of the data collection method, participant observation "encourages researchers to remain close to their studied worlds and to develop an integrated set of theoretical concepts from their empirical materials that not only synthesize and interpret them but also show processual relationships" (Charmaz 2005, p 508). Research questions such as the ones in this study that seek to explore beliefs or perceptions are well served by using qualitative methods (Annells, 1997). Because "qualitative studies are often judged by quantitatively-oriented readers" (Corbin and Strauss, 1990, p.4), a triangulation method of interviews, corporate documentation and field notes has been used. This helped to retain the integrity of qualitative social science and to address questions of validity (Corbin and Strauss, 1990).

Full immersion allows the researcher to gather many different sources of information and gain a 'true feeling' for the organisation. Alongside interviews and corporate material, it is possible to triangulate the data to establish a fuller picture of the phenomenon (Patton, 2002).

In Case Study One, the research was conducted as part of training programme in which the learning cohort was observed all together, being trained and in writing their learning journals. As the trainer in this programme, I interacted with the learning cohort but also kept a distance. For Case study one, I was employed as a trainer and consultant but also knew many of the medical professionals as former colleagues. Constant dialogue between the employees and former colleagues was used to engage in open and frank discussion about the interpretation of the data.

In Case Study Two, I observed new routines in the hospital setting. I was under an honorary contract. I attended team meetings for six months where the routines were discussed amongst the clinicians and ward staff. I also had access to public events and presentations about the new routines and these were recorded over a six-month period. A copy of my honorary contract as a research student in the host institution included in the appendices.

So, although I was not a paid employee, I had open access to all information and meetings. This created a further dilemma in relation to the danger of becoming too close to the information. However, the credibility of the data can be supported by the use of different sources of data, and their triangulation within the analysis. In addition, I fed back information about the study to the service improvement team who were implementing the learning of lean methods. The Feedback was given in the form of a report and presentation to the staff so that there could be open dialogue on everything from method of collection, the sampling, the interpretations. Some new information came to light in these discussions that initiated the re-reading of field notes and re-coding of examples.

I was officially attached to Cardiology as a Research Student. My honorary contract gave me full access to all participants and all parts of the hospital. In the first few months or meetings, participants were reminded verbally at the beginning of each meeting that I was there to gather data. The clinical champion for the Project was my supervisor. He was an Obstetrician and did not have daily contact with the ACS team. In fact, HB's knowledge of Cardiology extended only to what he had learned in medical school and he had no training in lean methodology. I became part of Service Improvement Team with official liaison status to the Cardiology Department.

Figure 3 helps to illustrate how close my relationship was to the participants and the material in Case Study Two. This special access as a prolonged participant observer is part of my comment on methodology in practical contributions in Chapter 7.

Figure 3 ID Badge and smart card as Participant Observer In Case Study Two

3.4.3. Prolonged engagement

The use of prolonged engagement allows for a level of detail that is not possible in short-term study designs. It also delves deeper than the more tangential contact with an organisation, for instance in doing interviews only. Spending time within an organisation culture provides a more appropriate level of knowledge in determining the importance of data that is provided in other forms of data collection i.e. document analysis, interviews, and observations (Given, 2008). The most important element of prolonged engagement for a qualitative study is to build trust with participants and experience the breadth and variation of activities within the research sites. A first meeting for an interview on a research site might develop into a particular view of that organisation. However, if one has the opportunity to view the organisation over a longer period of time, the complexities of that organisation begin to emerge and could make a re-interpretation of what was said in an interview very different. There is no set amount of time that a qualitative inquiry should last. The length of time should be long enough to develop familiarity with all the idiosyncrasies of the organisation's process and its individuals. Persistent observation is a technique used in conjunction with prolonged engagement. The persistency proves a depth of experience and understanding of the phenomenon in addition to the broad scope of prolonged engagement (Bowen, 2009).

In order to overcome the perception of bias in the interpretation of the data certain strategies were used: as a researcher I had prolonged engagement with both institutions. It is also important to note that prolonged engagement comes with challenges. The researcher can drift into being 'part of the team' and therefore perhaps the study almost becomes an ethnographic study in which the researcher must be ware of influencing the outcomes. In the present study, I overcame this problem in three ways. Firstly I wore my Research Student labelled badge as a reminder of my status. Secondly, in meetings or interviews I verbally reminded staff that I was research student. Lastly, conversation about the data analysis with my PhD supervisor and student cohort helped to give me some objectivity.

In the design of this study, the main data collection involves interpretation and self-reflection of interview transcriptions, field notes, documental analysis, and artefact analysis. The credibility in the accuracy of the data is established through methodological triangulation and theoretical saturation.

3.4.4. Documents

O'Leary (2004) contends that there three primary types of documents: (1) public records e.g. Official reports, mission statements of an organisation; (2) personal documents, e.g. e-mails, learning journals, blogs, duty logs; and (3) physical evidence, e.g. flyers, posters, agenda and training materials. A researcher must choose which documents will be used and illustrative to the research study. Bowen (2009) suggest that there be the widest array possible. The researcher must also consider bias, both from the point of view of the researcher reading the documents but also the organisation's use of documents and their overall tone. An evaluation of the purpose of the document must also be considered in order to place it into a frame of reference within the research. The information that is gleaned from these documents is organised into "what is related to central questions of the research" (Bowen, 2009, p32). Document analysis is the practice of interpretation of the ongoing public record of an organisation's activities. (Bowen, 2009). The rationale for using this type of data is part of the triangulation source to 'provide a confluence of evidence' that creates

credibility (Bowen, 2009). The analysis can provide a broad overall picture of the organisation and the phenomenon that is being studied.

I had access to written documentation, which included the minutes and agendas of team meetings; notice boards recounting the new routines and methods that staff have learned; PowerPoint presentations given by and to staff; and the presentations of NPC consultants. All of this documentation provided an integrated picture of how learning moved through the organisation. The variety of the data also provided opportunities for triangulations (Corley and Gioia, 2004; Denzin and Lincoln, 2002).

Table 11 gives the details of the document types and timing of access for Case Study One. The Learning Journals served as the most useful part of the empirical data as discussed throughout Chapter 4; Findings of Case Study One.

Table 11 Documents from Case Study One

Study Phase				
Source/Audience	Pre Implementation training	During Implementation and training	Post Implementation training	Total
External/external (articles, websites)	3	3	5	11
Internal/internal (bulleting boards, kaizen board, process maps)	2	5	5	12
Web Pages	4	3	3	10
Learning Journals	N/A	40	43	83
(NB each learning journal contained between 7 and 15 pages depending on how much the participant wrote; the learning journals accounted for approximately 300 pages)				
Meetings	2	2	2	6
Training sessions	2	3	4	9
Focus groups	1	2	2	5

Table 12 in a similar vein is the data for documents and materials for Study 2. This second set of documents for case study 2 covers a wider range of types because the access to Case Study Two organisation was much deeper than Case Study One.

Table 12 Documents for Case Study 2

Study Phase				
Source/Audience	Pre Implementation training	During Implementation and training	Post Implementation training	Total
External/internal (articles, websites)	1	3	3	7
Internal/internal (bulleting boards, kaizen board, process maps)	N/A	3	N/A	3
Meeting minutes	N/A	12	2	14
Meetings	4	12	2	18
Meetings action	N/A	12	2	14
Logs				
Emails	N/A	144	5	149

3.4.5. Non-narrative material: Photographs and Screenshots

Non-narrative representation of data can enhance a qualitative study by providing additional meaning and context for the reader (Yin, 2011). Non-narrative representations might include: "graphics, photographs and reproductions, even drawings and sketches. Some version of any of these materials, narrative and non-narrative might appear as slides."(Yin, 2011, p 249). The assumption is that the audience for your data is interested in the 'condensed' version of the data and be drawn to its conclusions. A photographic representation of some of the data highlights for the audience what the researcher saw and felt during the fieldwork. It helps to places the audience in the mind of the researcher and perhaps the participant to visual images. This combined with the field notes help to 'paint a picture' of the data story for the reader.

The use of visual material in qualitative research is not new . There is a rich history of using photographs in anthropology and sociology (Bateson and Mead, 1942, Prosser and Loxley, 2008), and a broad field of using visual methods to conduct research (Grimshaw, 2001; Pink 2003). Photographs help to convey meaning about the research study. Visuals may hep the reader to get 'beyond the situated-ness' of assumptions (Stanczak, 2009). The visual material helps to establish the credibility of the research adding to the 'truthfulness' of empirical social knowledge (Stanczak, 2009). Photographs can help to express the researcher's "strongly held ideas" the places and culture, in this case organisational culture of a given study (Gubrium and Harper, 2016).

I used photographs in both of the case studies to establish congruency between descriptions of events in the field notes and the depictions of events in the organisation (Gubrium and Harper, 2016). In Case Study Two, I used photographs as historical evidence to aid in the interpretation of meaning for the learners in the lean programme. I noted what was being seen, and heard that might influence the learning of new routines.

3.4.6. Trustworthiness of the data

A major concern for any research project is the trustworthiness of qualitative data (Tong, Sainsbury and Craig, 2007; Tracy, 2010). Guba (1982) states that there are five components to trustworthiness: credibility, transferability, dependability, confirmability and reflexivity. 'Credibility' seeks to establish whether the findings are plausible based on the data presented, and whether the findings can be established as a reasonable interpretation of the participants' views. Other factors that contribute to credibility re: prolonged engagement, persistent observations, triangulations, peer debriefing. Triangulation can be accomplished by repeated questions to different participants and collecting data from different sources. Dye, Schatz, Rosenberg and Coleman (2000) also suggest 'member checks' as a way of confirming the interpretation of data. This involves asking participants to review the data collected by the researcher. 'Transferability' relates to whether the results can be applied to other contexts or settings. Generalizability in qualitative studies in limited by the nature of the studies. 'Dependability' expresses whether the findings will have stability over time. In other words, are the interpretations of the findings and recommendations supported by the view of the research participants? 'Confirmability' refers to how the research can be validated by others, by showing that the findings aren't a singular representation of the researchers own views. Reflexivity highlights the researcher's own biases and preconceived notions about the research, the research site, or the participants (Guba and Lincoln, 1985).

In April 2014, the Service Improvement Board asked me to present my findings about what had been learned in the lean implementation in Cardiology. Some of this information is not included in the

PhD as it contained patient data. However, as part of professional reciprocity I did do some statistical analysis for St. Lydda's and part of that was presented back to the Improvement Board. No patient information was contained in presentation. The relevant information for my qualitative study is that there was a very small positive effect on patient outcomes. It was already apparent that no real learning had taken place. The development areas were largely to say that good quality clinical care was being given but in the nearly the exactly the same way as it had before Lean was introduced .

Reflexivity in a Field Notebook

Feld work diaries, reflective diaries, personal work journals are a parallel form of data collection (Yin, 20011. These journals or diaries chronicle the journey of the researcher and the emerging thought and themes of qualitative research. The researcher immersed in field work is also an instrument to record the data of sights and sounds. So the field diary is way of recording the impression to fit empirical data that can't be captured any other way. It reveals the tendencies in interpretations of over time which can either confirm or refute the interpretation of emerging themes. Reflection is the art of examination of our 'ways of doing' and questioning ourselves (Haynes, 2012). Interpretation of the data doesn't always mirror reality but is instead influenced by the researcher's own influences and assumptions (Alvesson and Skodburg, 2000). Thus the researcher needs to turn their examination towards themselves and question their own claims of truth (Cunliffe, 2003). Diaries are a natural method of data collection and serve as a self-surveillance tool. A researcher can make entries at regular intervals during the data collection and the period of analysis these entries can be a recording or the decisions and thought processes in the development of the analysis (Lincoln and Guba, 1985).

In this research study, as a researcher I was so close to my subjects and the data that a diary was helpful in gaining distance and objectivity in my interpretations of events and meanings. The diary was also helpful in recalling dates or occurrences of conversation and timelines of events and dissemination of information. In a section of my field diary for Case Study two, There is a recounting of a very open dialogue with senior executives at St. Lydda's about whether length of stay had changed or whether it was a natural phenomenon to be expected when reviewing over a number of years. I also recorded in the field diary, a subsequent discussion on the data I was collecting and checking my interpretations with participants in the lean learning.

I used a field diary to record how I felt about the information I was collecting. My supervisor and fellow PhD cohort were involved in discussion of the emerging patterns. My supervisor and colleagues challenged assumptions and help to confirm the robustness of my analysis (Langley, 2009). In addition in case study one, I had the help of external resources at an American institution to discuss and review the interpretation of the data to help ensure its reliability and accuracy (Bryman 2012).

3.5. Ethics

Ethics in this project were guided by four main principles: to avoid harm to participants, to obtain informed consent (Eisner, 1991), to avoid invasion of privacy of participants or peripheral agents (such as patients of the medical staff interviewed) and finally to avoid deception (Bryman 2008, p124).

Studies that are conducted within a healthcare setting need special consideration where there may be a tendency for participants to perceive an alliance with the researcher because of the setting (Ramcharan and Cutcliffe, 2001; Stacey, 1988). For example, research in health care can prompt a 'therapeutic misconception' where patients, caregivers or clients believe that results will be better because they are associated with a 'clinical trial' or 'experiment' (Bourgeault, Dingwall and DeVries, 2010, p 590). However, no patient data were used in this study and discussions were centred on medical practices and procedures to highlight learning processes.

There is also a phenomenon known as 'Institutional vulnerability' when health care workers sometimes feel compelled to participate because research is for the greater good. As health care workers are part of a caring profession they may be more tempted to participate in research. Extra vigilance is required in ascertaining consent and understanding the participants' frame of mind towards their involvement in interviews or other parts of the research.

Most importantly, a "self-critical attitude" should be taken towards the unequal relationship that inevitably exists between researcher and participant, "with requirements of informed consent in mind and practice" (Bourgeault et al, 2010, p316). As a participant observer, I was very close to the participants and to the data. I kept a reflective diary in order to maintain some level of separateness from participants and to record my experience as a researcher within the host institution.

3.6 Data coding and analysis

As outlined above, this research study is grounded in an empirically-based approach (Gioia et al, 2013, Langley, 1999; Pratt, Rockmann & Kaufmann, 2006; Seale, 1999). The study comprises of a range of data that illustrate perceptions of individual learning during Lean implementation.

A 'flexible method of inquiry' was an important approach in relation to establishing themes and concepts about learning as they emerged (Bryant and Charmaz, 2007). It allowed the researcher to explore more fully the underlying reasons for a particular phenomenon. The study also made use of a naturalistic approach in that it is a "discovery oriented" study (Patton, 2002) conducted in situ as it seeks to understand a real-world situation without any manipulation of the environment, and without any predetermined constraints on the outcomes.

Qualitative studies depend on in-depth, detail-rich data to understand a phenomenon (Denzin and Lincoln, 2008). Patton (2002) supports the use of qualitative inquiry for studying human, interactive processes because a study of this kind requires such intricate detail to understand the interrelationships between the environment and the participants. In this approach, a 'naturalistic' methodology generates new understandings of current theory through 'systematic comparative analysis' between theory and observation (Patton 2002, p 133).

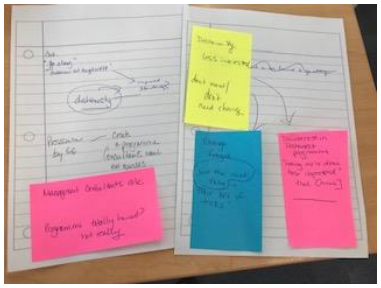
Data analysis using this empirically based grounded approach (Gioia et al, 2013, Langley, 1999; Pratt, Rockmann & Kaufmann, 2006; Seale, 1999) is guided by themes which are emergent from the research and not by preconceived notion (Bryman and Bell, 2011). The process of coding and analysing the data consists of three main stages: first order coding, second order coding to reate themes and then finally creating aggregate dimensions (Gioia et al, 2013; Saunders, 2009).

Many PhD students choose to use NVivo when interpreting the data for qualitative research. However, most of those studies tend to have transcribed data from interviews. This present study

had data form many varied and rich sources as previously described. Some of my data did not neatly fit into the types of notation that is required by NVivo. I had to rely on my interpretations of the various source material such as the photographs or screen shots and distil the impressions of those data sources into notes and words. Therefore, I took the decision to use an 'old-fashioned' method of index cards, post-it notes and concept maps to make sense of the data. Memo-ing and diagramming were also part of this process. The memos provided written records of ideas and thinking that emerged during the course of the analysis. I provide an example of 'memo-ing' from the research below with a photograph and a table.

Figure 4 is a picture example of one of the sets of post-it notes and concept maps that guided the interpretation of the data. Following on from Figure 5 is Table 13 on the next page is an example of the memo notation that helped to sift through the data and bring ideas for the concepts, themes and aggregate dimension. There were many iterations of this process to conclude in the final data structure shown in section 3.6.2 and 3.6.3

Figure 4 Example of Memo-ing with Post-its & Conceptual Map



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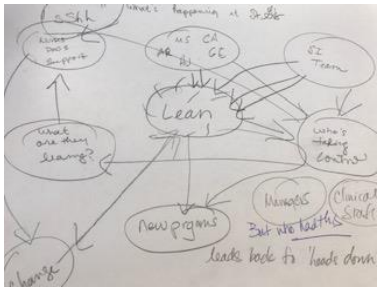


Table 13 of memo notations that I used to uncover the themes and concepts in Case Study Two. I used 'post-it' notes and discussions with colleagues on the meaning of events, the meaning of interviewee phrases, and how these pertained to my research. This is a screenshot of the table for economy of space.

Table 13 is an example of the memo-ing used in the data analysis

Examples Direct quotes & notes from Interviews and field note book	**First order Categories Ideas**	**Second order Themes**	**Aggregate dimension**
Induction haphazard (JGy) SHOs not properly trained (KR) Focus isn't on juniors but juniors are filling things out (NS) My reg tells me to…(SHO1) The senior nurse told me to…(SHO2) These meetings are at 8am for a reason, they are before the start of the day- it's over and above (ac)	Information/ Knowledge Ownership if I cannot own the information that I cannot intuit any meaning who gives me the information the information passed to each other is outside 'normal' work hours; it doesn't count	Organisation Dysfluency Misdirection of meaning Funnel of information Creating normative discourse	Discipline and domination
Who was in the first meeting, not me We want to empower you to ask but if you're not sure push it up (ZA)	**Managerial control** leads to absence of feedback **Mixed message** about how I can use the information and disseminate to my colleagues Politics of meetings and information flow Fear of giving feedback Limits decision making powers	Managerial control Feedback restriction Suppression of challenge	Discipline and domination
Got involved by chance (CS) Meetings are before the work day (Hmc) We do this as good will (KT) Moral imperative (HB) People involved in a project have a shared purpose (RW) Change is not the goal, the goal is the goal (HB)	Reliance on **good will** The information is seen as 'extra' but needed to do the job Learning from these **good will** meetings is essential but considered outside normal work Information outside the 'normal' work day is acted upon **Micro feedback loops** 'outside' the normal learning framework	Managerial control The dark side of org storytelling	Barriers and silence Discipline and domination
It was her idea, she used it previously in another hospital (CS) K had an idea for a research project and he was using this to investigate CG (consulting group) had something to prove because they wanted to use their 'system' elsewhere in NHS Of course patient safety was paramount but we could have gone about it in a different way and where I sit we were already doing the medical bit	Ideas used to further personal agendas and 'political agenda on organisational actors The **silence** and the Lie A **myth** that becomes truth A lie that becomes real	The dark side of org storytelling	Integration of the Myth
IT proposals changed from being about rehab to being about the pro-forma (HMc) The whole project shifted to be about documentation not the work itself (KK)	The 'voice' of the IT consultants was stronger than the employees who had been on the committee. The ward nurses and matrons that had daily contact with patients	Barriers and Silence Suppression of challenge	Discipline and domination

The data analysis used an inductive method favoured by recent research papers dubbed the 'Gioia method' (Gioia, Corley and Hamilton, 2013). The Gioia method provides a rigour to an inductive research process. The method identifies concepts, to categorize them and to identify the relationships between the categories (Gioia et al, 2013). After a series of interpretive processes undertaken individually by the researcher, and collectively in relation to participants, various emergent themes were drawn out of the analysis into a rigours data structure (Gioia et al, 2013;

Nag, Corley and Gioia, 2007). Therefore the following reasoning logic was not exclusively inductive but also abductive (Mantere & Ketokivi, 2013).

Coding is an integral part of the analysis through which distinct units of meaning can be labelled in into general concepts. Through iterative rounds of analysis, concepts are grouped into descriptive categories and re-evaluated for their interrelationships (Goulding, 2002; Saunders et al, 2009). As categories are abstracted, the underlying elements of a theory being to emerge. The coding process is guided by a chosen perspective in this case social constructivist perspective that was described in the research design section. The researcher is seen as the knowledgeable agent thinking at multiple levels simultaneously and making sense of the data through a constructivist lens (Gioia et al, 2013). The abstracted concepts highlight the substantive issues regarding the research questions (Goulding, 2002).

During analysis, the new concepts are at first provisional and those that are repeated take on greater significance. The repeated demonstration of significance helps to guard against bias. Data, including incidents, events and happenings, are analysed as potential indicators of the phenomenon and given conceptual labels. Concepts that pertain to the same phenomenon can be further connected in terms of similarities and differences and are then grouped into more abstract categories. These categories must be developed in terms of the properties and dimension of the phenomenon it represents. These specifications help define the categories and give them explanatory powers. By comparing the data and naming similar phenomena with the same conceptual label, the basic units of theoretical explanation begin to appear (Gioia et al ,2013; Langley, 1999). Categories can later be related to each other and integrated into a theory.

The present study is complicated by the fact that there were two consecutive case studies. The first case study chronologically occurred over the period of my transfer viva and a conference of the OLKC. As noted in the Chapter 5.1., the first case study was the subject of a conference paper and presentation and The data analysis is explained in Case Study One in that section of the thesis. The same methods and principles have been applied to both case studies. The following paragraphs describe the coding of concepts and themes in greater depth for the second case larger case study. The Second case study was larger because I was embedded in that organisation, St Lydda's, for a sustained period of time and on a more regular basis.

The initial stage of first order coding was quite honestly a bit chaotic as Gioia terms it 'getting lost in the data' (Gioia et al, 2013). In order to identify initial concepts, I re-read corporate documents, e.g. meeting minutes, emails, project agendas as well as the transcribed data form interviews and interview notes. As the body of initial concepts grew, I stopped selecting documents when I felt I had reached theoretical saturation in terms of core categories that are described in the findings and discussion chapters. In practical terms, I reviewed the notes form the interview transcriptions and entered them into a concept map on A3 paper. Then I reviewed the notes from interviews that were not recorded (some interviewees did not wish to be recorded so I only had my notes to rely on). Ideas such as 'induction haphazard', 'meeting before the meeting', 'empowerment', 'involvement', 'voice', 'not speaking up', 'his agenda', 'object of the lean programme questioned' began to emerge. These ideas in the concept map began to take a more meaningful form, for example, 'meeting before the meeting' eventually became 'the concept 'good will over stretched' as a first order concept. I spent a lot of time reading and arranging the data, the initial approximately 50 concepts were whittled down to about 28 concepts. This refinement was partly semantic as some concepts

seemed to be describing the same idea and partly reductive to draw out the most important concepts in the study.

The next stage of selection was Second order coding in more substantive themes. According to Gioia (2013) the object of forming the thematic codes in to identify "concepts that might help … to describe and explain the phenomena" that are being observed. I formed a nap of the thematic view of the codes to determine the connections and associations. This was difficult because the data comes from different sources. The concept of the 'meeting before the meeting' had to be reviewed in the context of using the meeting attendance lists from the meeting minutes. So the interview data from the participants was matched with the corporate archival documents in the programme meeting notation and agendas. The importance of who was involved in meetings was significant in more than one of the concepts and themes. In this process, overlapping concepts were merged together and unclear concepts were discarded. A major breakthrough in terms of the data was to realise that the themes needed to be grouped together differently. Specifically, the themes describing Barriers and Silence were in fact describing individual perception of barriers to learning an d on another level the organisational barriers to learning. The final data structure reflects that change in order to bring clarity to the phenomena being described.

The final stage of the coding creates the Aggregate Dimensions. These link the concepts and themes through a reflexive and dialogical process between the existing literature and data, the aim being to prepare a foundation for the explanation between (Mantere & Ketokivi, 2013). This process also underwent an iterative process. For example, discipline an domination is an allusion to the propositions presented by Lawrence(2002) and Jones (2000) and the idea of 'Myth' is a reference to research by Gabriel (2004). Initially, I described four dimension as Discipline and domination, Barriers and Silence, Integration of Myth and Aimless Learning. However, after my viva, in reviewing my thesis, I realised that Aimless Learning should stand alone as the new theoretical construct and that the four dimension titles should be changed to Discipline and Domination, Barriers (1) Organisational, Barriers (2) Employee Expectations and Integration of the Myth. This made the description of those concepts much clearer and aligned mores succinctly to the extant literature. The iteration of the data structures is provided in Figures .

3.6.1. First Data Structure (Case Study One, HealthCo)

Figure 5 below is the schematic of the data structure from Case Study One. It depicts the concepts as and themes as they relate to the aggregate dimensions. The memo notation as described in section 3.6 of this thesis was used to collect my thoughts about the barriers to organisational learning and the precursors to successful learning. The memo notation led to me organising the data structure to show how the perceptions of individuals undergoing Lean transformation in their organisation lead to non-engagement in learning. The themes and dimensions are explained in Chapter 5, findings from Case Study One, HealthCo.

Figure 5 the Data Structure from Case Study One

3.6.2. Second Data Structure (Case study Two, St. Lydda's)

The second data structure went through two iterations. When I was writing up the discussion, realised that I wanted to separate out the theoretical construct of Aimless Learning. I discussed the aggregate dimension with my PhD supervisor and we decided on a better alignment of the concepts theme and new grouping for the aggregate dimensions. I realised through conversation with my supervisor that the barriers to learning fell into two categories: organisational and individual. Therefore, I changed the names of those aggregate dimension to more accurately reflect the phenomenon that were being described. Furthermore, I realised that the aimless Learning was a description of the final outcome of the dimensions. The refinement of the analysis resulted in the four Aggregate dimensions of: discipline and domination, Barriers (1) Organisational, Barriers (2) Employee Expectations and Integration of the Myth are the antecedents to the outcome of the theoretical construct Aimless Learning. Below are two schematics that depict the thinking process of deciphering and narrowing the concepts and ideas into the aggregate dimensions. The individual concepts and themes are explained in Chapter 6 of the thesis.

Figure 6 is the schematic for the first iteration of themes and dimensions of Case Study Two. This data structure represents my initial thinking in terms of the themes and concepts for the data analysis in Case study Two.

Figure 6 Data structure for case Study Two version 1

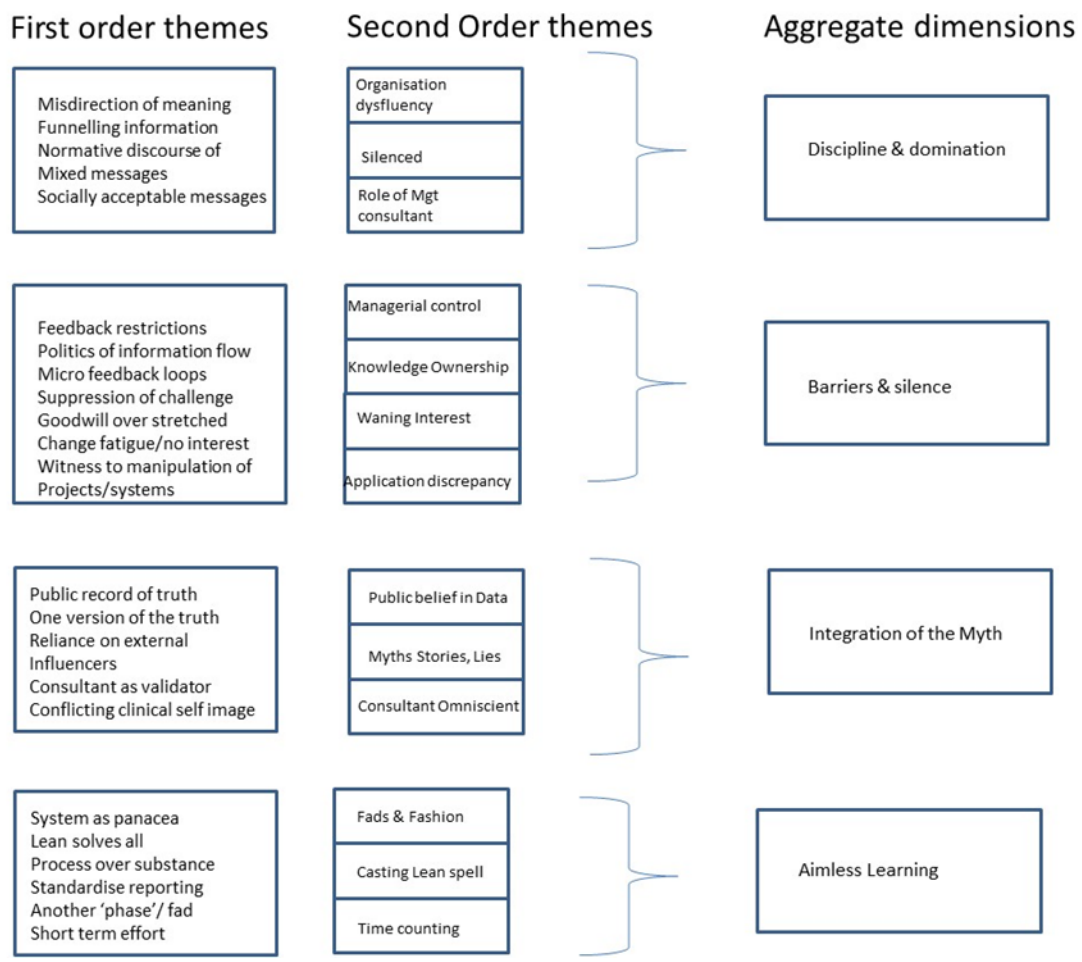
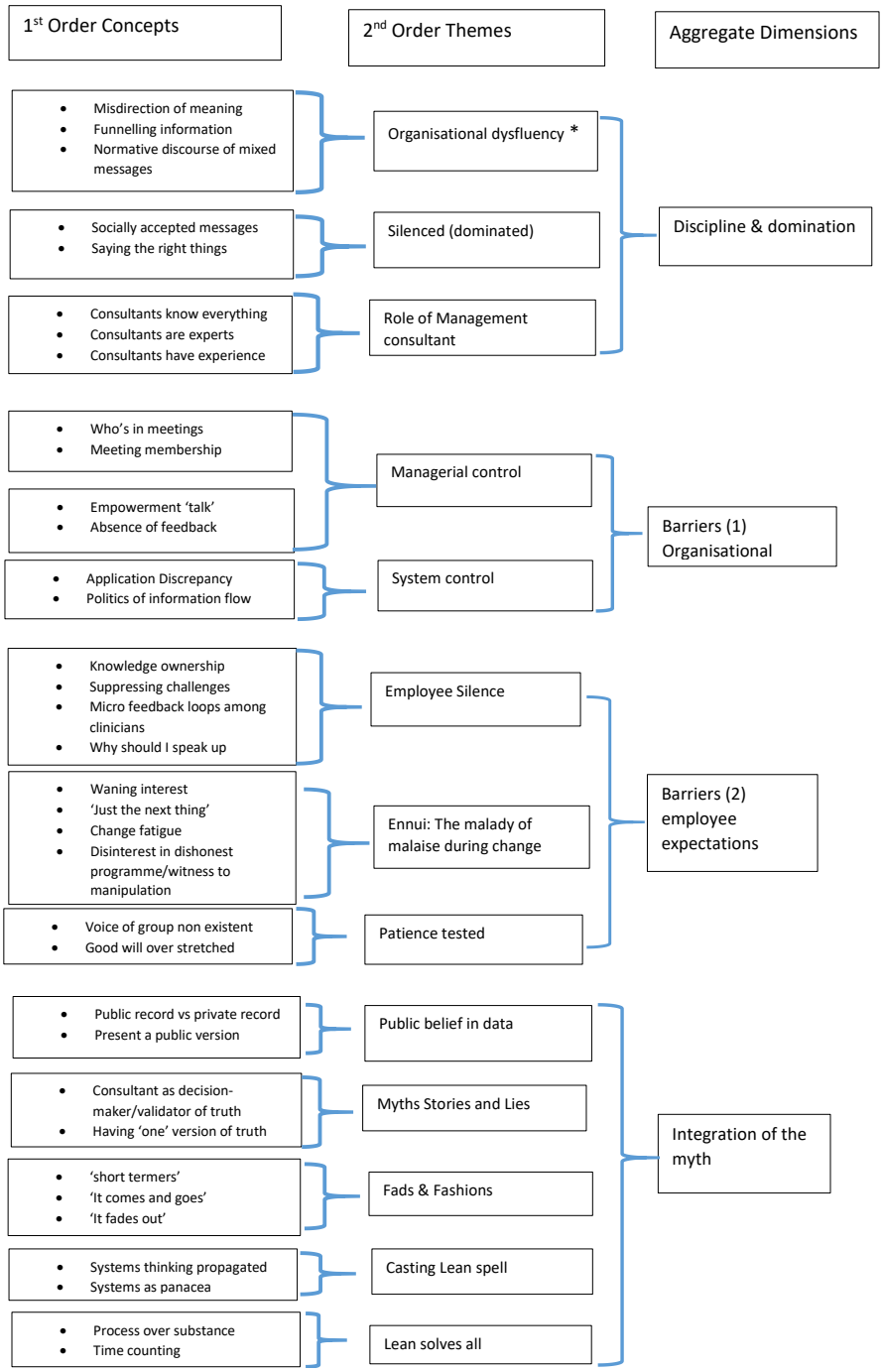


Figure 7 represents the second iteration and final data structure for Case Study Two. This improved data structure more clearly defines the barriers to learning at different levels, organisational and individual. It highlights the ideas of 'domination' and 'myth' that were perceived by the participants. Any future publications of this research material would use this structure to point towards the theoretical contribution of Aimless learning.

Figure 7 Revised Data Structure for Case Study Two



Practical aspects of the analysis stage

Throughout the data analysis, I conferred with my supervisor, Professor Russ Vince, for sense checking and practical advice about the interpretations. I also had the opportunity to feedback to the host organisations in both case studies. This meant preparing executive reports and PowerPoint presentations to the host institutions. They challenged me with questions about my interpretation and recommendation for future actions. This helped to clarify my thoughts about the research and the conclusions that I had made. I had the unique opportunity to review the data in a more expansive way after my viva. This resulted in a refined data structure that more accurately reflects the meaning of the dimensions and most importantly the contribution of the new theoretical construct.

3.7. Chapter summary

The chapter described the methodological approaches used for this study ranging from philosophical choice for the research to sampling, collecting and analysing the empirical material. It also covered the methodological tools used to explore how learning moves across the two case study organisations: Semi-Structured interviews, corporate archival documents, non-narrative documentation of photographs and screen shots. Each of these has been discussed in terms of their theoretical fit to this study. Moreover, my personal experience of applying these tools in the field has been recounted. As a reflection of the nature of the study, the inductive approach grounded in empirical data was deemed suitable for illuminating the ways in which organisational learning is experienced in the organisations under investigation. I have also included the methodological and personal challenges faced in the analysis of the data.

Chapter 4: Findings

4. Findings from Case Study One, HealthCo

4.1. Introduction

This chapter presents the findings on the collected data from Case Study Organisation One, HealthCo. The findings from this section formed the major portion of a conference paper 'The Missing Steps' at the Organisational Learning Knowledge Capabilities Conference (OLKC) and traversed the timing of the transfer viva and initial data collection of the PhD. I have left the write up of the paper fairly intact to demonstrate the progression of my thinking from Case Study One to Case Study Two. With exception of the description of the research site organisation, I have formatted this chapter with the intact conference paper findings and discussion. I have previously described the research organisation of Case Study One in Chapter 3, section 3.4.2. However, for points of clarity for this chapter, I have reiterated Case Study One's aims and analysis. The Case Study One aims are within the theoretical scope of the research questions for this thesis and the analysis is also fully aligned to the explanation of analysis and coding as described Chapter 3 methodology of the entire thesis.

I describe the learning pathway for mostly clinical managers as they learned Lean methodology and attempted to implement those practices into their medical sites. The underlying story gave a rich picture of how managers and their staff were learning within the complexity of a healthcare system.

When I undertook this first case study my initial thoughts were to use Crossan's 4I framework as a lens for interpreting the empirical data and to build theory. The main focus is the processes by which individuals, groups and organisations learn and how each of the concepts relates to a stage of the 4I framework. Using the Crossan and Berdrow (2003) matrix, each stage of the 4I framework is considered and explained in terms of the data collected from the host institution and employee's experiences of their learning. The data reveals a complicated pattern of interrupted feedback loops and interactions between individual, group and organisational levels of barriers to learning. This chapter covers the main aggregate dimension of 'Triggers for Non-engagement', 'Arrested Learning' and 'Role Conflict'. Each section of the aggregate dimensions provide a short summary of the content of the themes that support each dimension.

The qualitative analysis which undertook a close examination of interview transcriptions, corporate archival documentation, field notes from meetings and participant observation in the host organisation. The corporate archival documentation includes: internal and external PowerPoint presentations, information from bulletin boards, meeting minutes and agendas, action logs and email announcements to committee members both staff and non-staff. The aims of the analysis for Case Study One were to:

1. Understand how staff members were experiencing learning with the new lean processes

2. Understand how staff members experienced the stages of the 4I framework

3. Explore the underlying perceptions and beliefs towards learning 'lean' in a change programme

My primary intention was to follow clinical leaders through their learning journey from clinician to manager. My pilot phase centred on a cohort of clinicians learning lean practices. Their learning journals revealed much about their individual learning but also about how the staff were learning to change to the new lean methods. Delving into these stories created a rich picture of how people

learned within a healthcare setting. From this discovery, I progressed the intent and interest to expose the complexities of learning in this particular healthcare context and scenario. The decision to use 4I framework was not to prove or disprove Mary Crossan's theoretical framework. Instead, the 4I framework seemed the best fit to attempt an explanation of what was happening although there were marked and interesting differences in the phenomenon uncovered in these studies then had not been previously explained, namely that managerial control over the flow of information produced surprising outcomes in the integration phase of learning stages. Therefore, I used the 4I framework as a basic structure to probe in more detail how learning take place in these healthcare settings.

For Case Study One, the analysis focuses on identifying the underlying elements in each of the stages of the 4I framework. Crossan Lane and White (1999) first described the 4I framework as multilevel interactive process that showed how learning moved through an organization. The '4I Framework' (Crossan, Lane and White, 1999) proposed that learning moved across an organisation in an orderly and systematic way as a 'pure process' to embedding learning in the organisation. The feedback loops, both feed forward and feed back, were essential to the assimilation of learning into the institution. Yet similar to Rashman, Withers and Hartley (2004), I have uncovered barriers to learning in each of the stages. At the same time, the organisations were instituting Lean Methodologies which has its own area of research. Learning lean provided a platform to understand how employees perceive learning a new method of working and the learning itself. The contribution to the literature is to bring together the intersection of these two areas of research for the healthcare sector.

In a large US healthcare consortium, I analysed the learning journals from a cohort of clinical managers as they learned new Lean methods. The study began as an analysis of how physician leaders viewed their learning journey from clinician to manager whole learning lean. When deciphering the meaning of comments and actions of these managers and their staff, it was clear that there was a bigger issue about learning lean in general. Having mapped the progress of lean implementation and its effect on processes and procedures, it was evident that not all staff were experiencing the learning in the same way, and some not at all. There were gaps in learning and gaps in implementation. To make sense of the data, the 4I framework was used as one legitimate explanation for how learning was meant to be moving through the organisation. However, not all employees had the opportunity to follow an ordered way of learning. It seemed some were missing steps in the process.

I found that at each level of learning, staff described differences in their experience of how information had passed through the organisation. There were peculiarities about the way in which information passed through each stage of the framework and indeed if the stages were experienced by all in the same way. Toward that end, I analysed the data to assign a range of theoretical concepts that have been previously used to describe related phenomenon but have now applied this to organisational learning framework.

Case Study One: Data collection and Analysis

This is a description of data collection and analysis of Case Study One as the intact paper that was presented at the OLKC conference. Data collection employed three techniques: (1) semi structured interviews (2) written and electronic documentation, (3) observation. We relied on all three sources of information as important triangulation (Corley and Gioia, 2004; Guba and Lincoln 2005) and to understand how events and comments were related to each other in building the concepts and themes (Yin, 2009). The interviews were conducted in person and over the telephone with senior members of HealthCo staff.

For my analysis, I drew from a constant comparison technique (Corley and Gioia, 2004, Strauss and Corbin, 1990) as well as recent examples of moving between first order issues, second order themes and aggregate dimensions (Corley and Gioia, 2004; Payne & Payne, 2004, Palmer & Short, 2008). The overall focus of my analysis was to understand how learning passes from one stage to the next from the employees' perspective and in particular how learning of a new routine moves through the 4I Framework.

My data were grouped into categories using open coding (Strauss and Corbin, 1990). The themes were found using axial coding (codifying relationships between the categories and themes). Three researchers coded the data independently in order to be able focus on shared interpretations (Huberman and Miles, 1983; Yin, 2009). The researchers then came together to ensure consensus on the interpretation of concepts and themes. We worked through the process of coming to a shared agreement on the codes. We combined codes that were similar to each other developing a list of codes that we included in the next iteration of coding. When two coders disagreed, the third coder would use their judgement to help come to consensus. We kept coding until we came to theoretical saturation (Locke, 2001). We triangulated our findings by using multiple sources of information, interviews, documentation and observation (Corley and Gioia, 2004; Lincoln and Guba, 1985). To further enhance the trustworthiness of our data we consulted researchers not connected with the study. Two of these researchers were from management and the other from sociology. An additional researcher was then asked to review the themes and concepts where variation between the three coding researchers had occurred.

For completeness of the intact conference paper, the table linking the themes to stages of the 4I framework is included. Table brings together the explanation of the themes that linked to previous research articles and to a particular stage of Crossan's 4I framework or Huber's explanation of learning, e.g. policy fatigue links to a lack of motivation as previously described by Szulanksi (2003) whose work links to the Intuiting phase in Crossan's framework.

Table 14 The table depicts the interdependencies between the barriers to learning at different levels. For example, A distancing begins to occur at intuiting level. As that behaviour gets embedded in the organisation, the institutionalising result is that systems are blamed.

Table 14 Links to of Barriers to OL definitions

Themes & Concept Based on grouping of theme	Link to Previous Research Articles	Links to OL Definitions Crossan (C) and Huber (H) Stages
Triggers of Non Engagement – some intuiting, interpreting, integration of site specific information not company's intention		
Policy Fatigue Initial Enthusiasm wanes Interrupted feed forward does not pass from intuition to integration	Lack of Motivation Szulanksi (2003) Biases in employees Huber (1991)	Intuiting (C) (Knowledge and Acquisition (H)

Non Compliance No integration or integration of 'personal agenda' Innovation overlooked and interest supressed	Lack of absorptive capacity Szulanksi (2003) Sun and Scott (2005) Sun and Scott (2005)	Interpreting (C) Information Interpretation (H) Integrating (C) Information distribution (H)
Discrepancies in programme application Site specific changes to lean feed fwd and feedback interrupted because integration filters other items Person specific changes to Lean feed forward limited interpretation of learning changed	Unwilling to follow Top-down change (Beer & Eisenstadt, 2000) Hidden agendas (Sun and Scott, 2005)	Integrating Interpreting
Conflicting managerial agenda Lean used for personal agendas Meaningful use versus time saving institutionalisation of 'busyness'	Power structure & power relations (Starbuck & Hedburg 2003) Focus on unimportant activities (Gilley, Boughton & Maycunich, 1999) Management Fads Abrahamson & Fairchild (1999)	Integrating Integrating Institutionalising (C) Organisational memory (H)
Arrested Learning - No learning – complete barrier		

Distancing Use of 3rd person when describing errors	Distancing (Argyris & Schon, 1978)	Intuiting
Systems blamed	Technical difficulties (Nonaka 1994)	Institutionalising
Disconnectedness Unwilling to engage in deep discussion	(Argyris & Schon, 1978)	Interpreting
Reluctance to tackle big issues	Loss of ownership (Sun and Scott 2005)	Interpreting
Misalignment of leader role & learning – some integration and institutionalising but of personal agendas		
Misalignment of roles Expressed learning and actual learning differ	Identify with past learning (Weick, 1996)	Interpreting
Desire to learn and ability assimilate differ	Not stored in organisation's memory (Huber 1991, Levitt & March, 1988)	Institutionalising
Learning values ≠ **Leader action**	Inconsistency in goals	Institutionalising
Publicly declare Lean not applicable	(Godkin and Montano,1991)	
Declare lean important 'in some cases'	Perceived lack of improvement (Beeby & Simpson, 1998)	Interpretation

An Adaptation of Schilling & Kluge (2009)

Case Study one was using the 4I framework as a backdrop to make sense the empirical data. Table 15 is a selection of quotes from the empirical data used in the analysis. This serves to show how the quotes were used. These specific examples and quotes from participants were used to illustrate the interpretation into themes and concepts.

Table 15 Representative Quotes form Empirical data in Case Study One

Theme		Representative quotations
		Triggers of Non-Engagement
Policy		"People get really excited about change when they are in the (Lean training) sessions and we've had some good

Fatigue		results from the first round of RIE (sub committees for Lean) and lots of sites had their success on bulletin boards but once that first round is done, any other learning seems to slow down" "There are the small victories but to keep it sustained seems impossible" "I would like to see the group on board but it's enough to meet criteria for standardizing care" "the principles enhance the clarity" "there's no time make changes" "the process of reviewing the department's accomplishments helped me individually" but there are weaknesses in the department "trying to prevent burnout; learn to deliver constructive criticism" "prioritize corporate initiatives for change in department so that there isn't change fatigue"
Discrepancies in application of programme (Lean, Six sigma)		"At first, the changes were easy, we changed the checking-in process and now there is no waiting time for the well visits…. but when we tried to change the docs schedules, they just wouldn't do it" "We could learn new ways of doing things in some areas but not when it came to the docs, their view of Lean was different" "We were using as support for the changes in case management" as process improvement "I look at the goals and then redefined them" Nurse, "we were able to look again at the procedures and address what we considered to be the barriers" "using lean to affect change" "I don't order diagnostics 9x-rays) unless I believe it is essential to the outcome" [admin staff] " if all leaders viewed their departments within the lean concept improvement should be the outcome"
Conflicting managerial agendas		"It's all well and good to change the waiting room but my patients aren't cars, they can't be treated like that" "Revising the plans so they'd fit with I needed the RN pool to do, some of it was physical layout but it was mostly aligning the RN to with our (phsucican0 practices" Use lean to "make department feel like they have a say in how we run operations"

		"find ways to increase my visibility in the organisation" " I will learn to manage my time more effectively through new routines" "interpret the new ideas and opportunities to ensure that the organisation can grow"
		Inhibiting learning or problem solving
Distancing from errors		"Errors with lab orders were found". "They [physicians] continued to undermine and are unable to take suggestions" "corrections made with others" *** use of objective third person to describe error "the agencies (temp staff) don't always follow through on our priorities" "the agencies aren't as effectives as we would like" " promote good citizenry" "we are trained to be good soldiers not good generals" "difficulty retaining people" "clinicians feel isolated" "resolve sub-optimal performance; support policies and protocols which will continue to improve provider satisfaction "learn the vocabulary of leadership to evaluate problems and drive solutions"
Disconnecting from difficult issues		"Some staff were depressed and afraid of punishment" "People backed away from making decisions even when they were hiring new docs" "a couple of outliers persist" in doing things their own way " we need to present ourselves in a positive light to our customers"
		Dissonance of leader ambition versus aim
Leader espoused values versus daily activities		"In the meetings she'd say one thing but then do something else or worse say things to other people" "it was a case of yes in the room and do something different afterwards but if you ask them if they think Lean is a good idea they'd all say yes" "I directed the problem solving and I felt the outcome met my expectations" (leader isn't allowing the group to

		gather feedback and adapt to it – he is still 'directing' the solutions vision: "create a department that provides highest level of patient care" versus Personal learning goal was for their own "maximum efficiency" and "marketplace positioning" "adapt the lean goals to suit us" "Things [changes] have to be aligned with my mentors" "most of the physicians in my team appreciate their strengths but don't want to see their own weaknesses, they blame the programme for hold-ups" "outcomes vary 1/20 continue to undermine any suggestions and failed to recognise any feedback/ideas"
Learning values ≠ Leader action		"The new docs that were hired don't even want to work the evening schedules, no one is prepared to do the hard stuff" "when there's a difficult conversation, the docs just ignore it" "it [the project] has to be in line with my goals to move forward" "we talk about encouraging authenticity but my docs don't speak openly about objections, they just do what they have always done" "learn to communicate my goals to them" The leaders we want to convince need to be "profiled and targeted" yet they would describe themselves as "open minded and creative problem solvers" "learn how to mould individuals" "become more involved in committees" "would like to see lean implemented further"

Phase One: The Pilot for Case Study One

My project began by reviewing the reflective learning journals of 40 LTP participants. The 'learning journals' were personal written accounts of the individuals' learning journey through leadership classes and Lean 'Rapid Improvement Events' (RIE) over the nine-month period of the training. The journals were personal and professional expressions of their learning and their experiences during the implementation of the Lean approach.

My initial goal was to understand how journal authors were experiencing the impact of their learning. The learning journals encouraged free narrative, but journal authors were also guided in their responses through specific questions (see Appendix X). These included, for example: 'does the learning support my personal vision and goals' and 'how did I apply my learning from the last seminar'? The participants did not constrain themselves to the questions and wrote detailed and confessional accounts of their own daily activities, as well as writing about the experiences of their staff. I identified a strong theme from the journals, which was that they experienced learning about and implementing the routines of Lean improvement both as an obstacle to learning and as an opportunity to learn. I decided to concentrate on analysing this contradiction in relation to the 4I framework for organizational learning.

The findings from phase one led us believe that there were obstacles to learning that had not previously been uncovered in other research with respect to the 4I framework. Participants viewed learning differently depending on what stage of learning they were introduced to an idea. For example, "we didn't own the process (intuition), it was just handed down to us (integration)" (Practice Manager 3).

Participants expressed their learning goals in terms of new institutionalised routines, for example 'memorise protocol for concussion management guidelines in student health' (Physician LJ 22). The routines were not questioned or fully interpreted by all staff, they were simply implemented and institutionalised. We therefore decided to investigate the flow of learning, paying close attention to how people describe their own learning and staff learning in terms of the 4I framework.

Case Study One: Phase Two

Phase Two of the study involved interviews with 9 of the individuals who were involved with lean implementation in their medical sites. The participants had various roles in the lean implementation. Some were leading their own RIE session, others were only involved in discussions about changes to protocols or relaying the new set of protocols to their staff. Thus the participants represented the full range of experience in the stages of implementation and learning.

In addition, we reviewed a further training cohort giving us a total of 80 learning journals. We supplemented the learning journals with public information about the medical group such as websites, written and electronic documentation relating to remaining and the Lean improvement exercise, such as Whiteboards with the RIE progress charted or employees notices on websites. One of the authors also had the chance to observe participants in meetings and training sessions.

In accordance with Guba and Lincoln (2005), a procedure was followed for choosing interviewees and participants. The leadership and Lean trainees were chosen as participants because they had the knowledge of Lean learning and application in HealthCo, both pre and post training. These 'trainees' were a select group of individuals from the organisation who had privileged knowledge and access to committees and decisions. The leader trainees were considered among the best in the organisation; fast learners, initiators of change and people who were capable of challenging the status quo. In principle, this group should have been able to translate new learning quickly and institute new policy without difficulty. We assembled the accounts into themes and concepts from the full combination of interviews, documents and observations.

The analysis produced the second-order themes which were grouped into three aggregate dimensions, which I refer to as: triggers of non-engagement, arrested learning and role conflict/missed learning.

In this section we describe in more detail the first order concepts and second order themes that were uncovered in our analysis. The second order themes depict operational constructs that block learning flow through the 4I Framework. Each theme describes a range of issues or symptoms that stop learning from entering the framework in the expected way.

4.2. Triggers of Non-Engagement

This aggregate dimension is meant to represent the circumstances that might create barriers to learning. The underlying themes to this aggregate dimension 3 organisational culture conditions that create the foundations for barriers to learning. The idea of a 'trigger' is to denote that this is a first clue that individuals no longer wish to participate in learning lean. The comments from the participants were expressing a 'satisficing' (Cyert and March, 1963; Winter, 2000) limit to their decision to continue or not with lean suggestions and implementation. The clinical leaders saw a lack of coordination for how to prioritise changes from the Lean programmes. Clinical leaders saw one policy after another being instituted but not being applied in the same way in each department. This created inconsistencies in the way organisational resources were allocated. It also created a situation in which individuals could operate under their own ways of working to their own agenda, eg.. "find ways to increase *my* visibility" (Physican 46). The example itself points to an organisational culture that allows mangers to set their policies and institute the learning they wish to embed in their part of the organisation. The emphasis in the illustration is on the idea of 'creating a situation'. However is wasn't just one instance or policy or managers that created barriers to implementing or learning. The word trigger is a deliberate choice to convey there was more than one condition and reason for individuals not to want to participate in engaging with Lean.

4.2.1. Policy fatigue:

About six months into some of the Lean projects, the practice managers we interviewed described a slowing down of initial excitement. One manager explained that the first two projects had gone really well, waiting times had been improved and supplies were being stored more efficiently. However, once capacity was reached with improved waiting times and another revenue stream needed to be identified, the group seemed to lose the inclination to continue with the lean process. The Physician Executive interviewed put it this way: 'once the easy stuff is done no wants to continue, they think the system won't work for them'. Lean did not continue to be applied as a holistic philosophy but instead as tools and techniques used to implement changes that were part of an existing strategic plan (Dutta and Crossan, 2003, Pettersen, 2009, Fillingham 2007, Ferlie and McNulty, 2002). The 'rhetoric' and 'ritual' of Lean (Radnor, Holweg and Waring, 2011, Waring and Bishop, 2010) were used to implement policy but the thoughtfulness in innovation was lost. This led to non-compliance with the policies and to either ad hoc implementation or no implementation (Schilling and Kluge, 2009; Radnor and Walley, 2008). The strong idea that there is a 'correct' Lean process got in the way of the emergence of a shared understanding of learning, blocking the integration and self-interpretation of learning and change.

4.2.2. Discrepancies in application:

Members of the organisation expressed discontent about how routines were applied in different ways across the organisation. For example, as a vibrant and growing company, HealthCo continued to take on new staff during the lean process. In the recruitment of new professional staff, an on-going issue of common practices such as discussing lab results over the phone or how speedily to return information to a patient was called into question. When these topics were raised, the Physician Executives 'lost their backbone' or 'no one had the energy for it' (Practice Manager 2). 'They wouldn't take the tough decisions to get them [new physicians] to come on board' (Practice Manager 2). Doctors also complained about Lean not being appropriate 'across the board' and that patients do not fit into a neat package (McCann. Hassard, Hyde and Granter, 2012). The doctors expressed a belief that Lean just didn't apply in some cases and that 'you just do what you need to do to care for the patients'.

4.2.3. Conflicting managerial agendas:

Managerial actions and attitudes affected the integration of the Lean routine as managers interpreted and used it for their own purposes using 'their own good idea' (Flinchbaugh 2008) in place of the Lean system. For example, in one particular site, a new functionality in the electronic medical record had been introduced. The new procedure for requesting blood tests and reviewing lab results had been developed through a Lean committee. However, Physician Executives refused to acknowledge the new way of doing things and they stuck to their old habits and rules of thumb about giving information to patients and what tests to order. There was a rift in the effort to be seen as providing physician services versus being concerned with administrative responsibilities. This meant any managerial decision would quickly be discarded in favour of the clinician's interpretation of the situation. At times, it was as if the work on Lean had not taken place. The Chief Medical Officer in HealthCo expressed concern over getting good people regardless of 'that system' that we have. The Practice Manager, however, viewed it as a 'step backward'. It was as if any efficiency that had been gained in the first round of Lean process were slowly slipping away. The 'interpretation' (Crossan et al, 1999) of action in this case was that doctors apply the programme as and when they think that it is necessary and when it works for them.

4.3. Arrested learning

This aggregate dimension is used to describe the building resistance to learning that occurred in the organisation. The first order concepts of distancing and disconnectedness describe employees as 'backing away from' the ideas of lean and beginning to disengage with new learning. The arrested learning aggregate is an amalgam of the themes that illustrates how a fixed mind-set and fear of failure were being created. The focus of Lean and performing at top level continuously was a daunting prospect to the already perfectionist driven clinicians in a healthcare setting. The 'systems' thinking of Lean subdued to the ideas of creativity and curiousity about mistakes or failures. Moreover, because the language of Lean allowed individuals to use third person, it helped to attribute failures to the system rather than being self-reflective. This inability to critically review one's own behaviour and learning meant that there was a loss of insight which lead to a stoppage in learning. I termed this cessation of learning to arrested learning because there had been an

opportunity to learn, but organisational circumstances stopped or ''arrested' the learning from taking place.

4.3.1. Distancing:

When leaders described their positive experiences with their teams and with the implementation of new initiatives, they used a first-person narrative. Strong connections between the lead and the team emerged. 'I spoke to each individual in my team' (Physician LJ 8) to make sure they understood. 'I went around to everyone to see how they were doing' (Physician LJ 8) and so on. However, when they described their experience with difficult people or problems, they expressed it in the third person, for example, 'there was an error made' (Physician LJ 62). The shift from individual accountability and towards passive dismissal happened when a problem occurred. The dichotomy of Lean in HealthCo was that it encouraged 'systems' thinking rather than blaming a person for problems. However, it also had the effect of helping to undermine personal responsibility for actions and, at times, the abandonment of common sense, which created barriers to embedding any type of learning (Hu, Found Williams and Mason, 2011).

There was a split between taking on the learning about teams and projects and having to tackle difficult issues. The use of a third-person narrative allowed managers to be more subtle or reserved in their expression of problems. They also attempted to distance anyone from the error, mistake or problem. For example, one respondent expressed concern that a 'medication error had turned up but the agency that supplied the medicine had been notified', which was expected to resolve the issue, with no mention of names or use of a first-person narrative. Our respondents switched from using the first person to third person without hesitation and this appeared to be an embedded behaviour within the organisation. At times, respondents distanced themselves from personal responsibility and from the 'rhetoric' of Lean (Waring and Bishop, 2010). Even the word 'Lean' began to be used against people in meetings.

4.3.2. Disconnectedness:

Difficulties of connection, in-depth discussion and the reluctance to tackle some issues were apparent when members of the LTP were asked to reflect on their learning. Most expressed great strides in learning. However, this did not always match what had happened in committee meetings or problem solving sessions. On one occasion, a group of physician leaders were working on a problem-solving vignette in training, one of the managers left the room to gain clarification on the problem. Meanwhile the other physician executives stopped working. When prompted why they were not discussing the issue. They reply was 'we can't, there are rules about discussing' (Physician 86). This was especially true when they were discussing a contentious issue. The managers become reluctant to speak poorly of one another or the company and the conversation would reach a dead end.

4.4. Role conflict

Clinicians were in a difficult position. The had a role as a medical professional but also as an administrator (Hoff199; Hoff and Mandell, 2001). The difficult for the clinicians was that they

needed to be change champion for the Lean transformation. Often this lead to changing priorities for the teams and perhaps changing the way things had previously been done for patients. Sometimes, the Clinical champion for Lean did not want to participate in this. The priorities and outcome for the two roles were difficult to reconcile. As one Nurse practitioner put it "am I a nurse or just a manager, who is my responsibility to…" (L5 NP 8)

Being part of an organisation with structures and procedures means that there is a dual commitment on the part of the clinician. They must carry out their administrative duties according to rules and regulations set by the organisational strategy not medical strategy. Physicians are trained to lead in clinical decision making. They are not necessarily ready to be seen on the 'other side' with the management. The idea of lean was viewed with scepticism by those who regarded their role to be first and foremost clinical.

4.4.1. Misalignment of Value and Role Ambivalence

Research participants expressed a great many aims and objectives in their reflective journals. However, direct interaction with them revealed that most of them had not been able to achieve their aims. For example, one participant said, 'when you get back to base, it's easy to slip into old habits (Physician 67); and, 'nobody has the time to spend on learning the new stuff' (Physician 67). Their aims and their activities slipped further away from each other until they discarded the aims and went back to 'the daily business at hand'. Participants expressed a desire to learn and to change but could not compete with their physician responsibilities (Hoff,1999). Furthermore, they found it difficult to transfer what they'd learned as an executive to their team (Swart and Harcup, 2013).

4.4.2. Leader value doesn't equal Leader action:

Most participants had fixed ideas about the meaning of being a leader. One participant expressed surprise that it didn't have to be 'us and them' or that leadership should be viewed negatively. The leaders were more effective when they had time to be reflective about their own journey to leadership. Yet they still had trouble putting in to practice what they had learned. When they set out to develop lean routines, they found it difficult to manoeuvre. The physician executives had a keen desire to please both their staff and their patients. Yet because safety for the patient was of paramount concern this eclipsed any learning or change that might take place. Their default leadership behaviour was to tell patients and staff members what to do. Some physicians explained it by going back to their medical training (that the physician is in charge and what he learns for a protocol he must adhere to or the consequences could be dire. The physicians held that notion above all other edicts from any other policy or management discussion. If a management policy called into question their role as a physician, they would withdraw their effort from management and concentrate on medical work. Hoff (1999) explained this as a paradox of legitimacy; an administrator is not trusted by their physician colleagues and vice versa. The emotional difficulty for these leaders affected their own learning and that of their staff (Vince, 2001; Swart, 2013; Yukl, 2008).

The 4I Framework links the flow of learning to strategic change on an organisational level but also to individual learning and changes in behaviours. Interruptions in this flow will lead to interruptions in

learning and prevent learning from being institutionalised. We identified themes within participants' LTP journals that describe these interruptions and their effect on learning flow.

Furthermore, Crossan, Lane and White (1999) suggest that for learning to be embedded, information or knowledge must pass through each stage. Similarly, Lean implementation is an attempt to encourage 'knowledge flow' (Anand, Ward and Takikonda, 2009). It seeks to address the problem of 'scatter' (things that disrupt flow) such as poor 'hand over' between groups within the organisation. The experience of our participants reveals a more complex explanation for learning flow.

4.4.3 Misalignment of their role:

An obstacle for physician leaders was the tension between their professional responsibility as a physician and their leadership role. They felt they had taken on too much when they 'had to be a leader too' (physician LJ 13). One physician explained it this way: 'I want to give other people a chance to do things but when at the end of the day, it's my license on the line, I'm responsible' (Physician 81). Participants felt conflicted between a desire to change old or broken systems and the worry that their daily professional work would not get done (Yukl, 2008; Fitzgerald et al, 2006; Hoff, 1999).

4.5 Focus on 4I framework for Case Study One

When we examined our data, we found examples that do and do not map onto the expected path of the 4I Framework. In one example, staff members of a team experienced each stage of the framework sequentially. As one doctor described it: '[Lean] provided solutions which would be impossible to arrive at alone' (Physician LJ 70). Another physician put it this way: 'Delegating to staff to let them institute process, this gets a positive response, leaving them to develop and implement' (Physician LJ 54). In this team, staff members were able to reflect, ask questions, and explore what the new routine meant to them. They 'passed' through each stage of the learning process at their own pace.

When organizational members were able to follow the four stages and had a mechanism to feed forward ideas to make change; institutionalizing the intended procedures was successful. Positive examples of institutionalization of new routines leading to better performance included shorter wait times; clearer processes for prescriptions; and a streamlined process for follow up appointments. We found that the positive experiences tended to reflect the simpler problems, particularly those problems that were not dependent on other parts of the organization.

However, difficulties in following the expected path mapped out by the 4I Framework were common in more complex situations. Stages were missed out or not experienced at all by some members of the organization. Feedback loops became stuck in a particular stage and learning was not carried forward, but a routine was still instituted. Such routines reflected the desires or political strategies of local managers more than the original intent of the learning. Employees' descriptions and experiences of the learning stages were different across the organization. Some felt that they were not part of the learning process, they had been overlooked or they had 'missed out' on important information.

Our findings suggested that new procedures could hinder learning rather than support it, and that when learning is either interrupted or disrupted, unintended routines can be institutionalized. From our analysis we concluded that there can be 'missing steps' or anomalies in the 4I Framework when new procedures or routines are introduced. These anomalies lead to interruptions of learning and they form the basis of barriers to embedding and institutionalizing new routines and procedures. The anomalies support a tendency to create localized learning rather than organizational learning.

Our view of these dynamics is that there is an inevitable tension between the adoption of new routines as a tangible outcome of learning and the tendency of routines to constrain the emergence of new ideas and ways of working. Healthcare organizations offer an excellent context within which this tension can be studied because they strive for standardization at the same time as they struggle with a wide range of contextually specific and persistent organizational problems and issues. The implementation of Lean offered a good example of these dynamics. Research participants experienced learning about and implementing the routines of Lean improvement both as an obstacle to learning and as an opportunity to learn. We do not see the tension here as problematic, but as symptomatic. We think that it may be more effective to design approaches to persistent organizational problems and issues from the perspective that there will always be tension between the potential for organizational learning and the micro-political processes that become obstacles to learning.

We found that micro-political processes, particularly relations between professional groups and/ or hierarchical layers of the organization, have a direct effect on feed forward and feedback loops. In our study, learning did not proceed in the same way for support staff as it did for managers or Lean committee members.

Managers and Executives were part of the Rapid Improvement Events and committees, and they were expected to 'pass down' the 'relevant' information. Learning was presumed to result from a top down approach. For example, we tracked the learning of a new scheduling method across the 4I Framework. The idea was to open new slots so that patients had more choice of appointments and greater capacity for patient volume. For this to happen, doctors had to adjust their patient assessment method, prioritize between patients and allow for more 'free' slots in the week. This meant that the routine of scheduling appointments had to change considerably. The physicians and managers decided on a course of action through RIE sessions and then told administrative and support staff how it should work. The support staff had to institute the new method before actually learning what it represented or its meaning to the overall strategy.

While feedback loops were evident, feedback was not generally used to develop an idea but instead it was used to change a routine into something else entirely. For example, one front line support staff member described her experience. 'We were just given these forms for the patients, to find out if they spoke English. Nobody wants to bother with that, but we were told we had to do it. I don't know why. We started asking people but got pushed back. We just told them we have to' (Focus Group 2). Patients were asked questions from a pre-printed survey, but the questions were asked out of order and staff recorded answers that did not pertain to the question. The staff had not been given an opportunity to interpret new procedures on collecting demographic information on patients, or to understand how to integrate the idea into their work activities. They instituted what they thought was the correct procedure but ended up alienating patients and co-workers. The learning 'entered' at the integration stage from the point of view of support staff. There was no

opportunity for questions or feedback. The result was that the data collected were often unusable for the medical site and the whole project needed to be started again.

It was imagined that feedback loops would help the organization to take advantage of individual learning and to exploit it into systems that made the organization more efficient. In HealthCo, there were examples where individuals tried to pass on their learning formally or informally. These attempts at exploitation were met with resistance: 'When that medical assistant got really good at taking the calls (triage) then she sort of passed it on to the rest of them but if it didn't comply with Lean then the [management] consultants told us not to do it' (Physician LJ 78). Although physicians would admit that Lean could have provided solutions that previous working groups or committees couldn't have foreseen or developed (for example, see participant quotes in Table 2), the solutions did not become sustainable. A lack of coherent strategy meant the loss of learning opportunities.

When an idea enters the 4I Framework at integration or institutionalization, it is more likely that the idea will be distorted and will lead to unintended learning. Conflicting organizational priorities fuel the already difficult task of grasping new learning and changing work habits. Organizational learning and other initiatives compete for attention (Hu et al, 2011; Flinchbaugh 2008; Ferlie and McNulty, 2002). The feedback loop is interrupted by managerial agendas, lack of learning focus, lack of shared understanding, restriction of learner's interpretations and over reliance on rigid implementation (Radnor Holweg and Hines, 2012; Stan and Vermuelen, 2013; Addicot, McGivern and Ferlie, 2006; Fillingham, 2007). Feedback loops, when they are manipulated by the political wrangling of managers, can stop the flow of learning altogether. Learning is interrupted within and between stages.

Feedback and feed forward loops become 'dead ends' resulting in arrested learning. Localized, fragmented versions of lean routines were adopted. This meant that the routines differed according to the manager's interpretation and implementation. Employees, mostly frontline staff, felt they had been 'missed out' in the process of learning. Managers 'jumped' processes in order to get what they wanted. We also identified difficulties in intuition and interpretation. For example, employees felt 'passed over' as managers 'leapt forward without them' (front line desk staff). Integration was seen to be the domain of managers. Institutionalization was more likely to be 'localized' when employees were not fully involved in each step of the learning process. Some members of the organization 'missed out' on the experience of proceeding through the first two steps of intuition and interpretation or never experienced the integration or institutionalization for themselves. In this sense, we did not find that learning was connected across stages in the way that envisioned in the 4I Framework. We found a messier, more politicized model.

Case Study 1 revealed that there were triggers for non-engagement. Many aspects centred on staff perception that they hadn't owned the process or the information. The learning hadn't passed to them in a way that allowed them to progress through the stages of the 4I framework. With this in mind, I wanted to look more closely at the experiences of the 'front-line' employees as they participated in learning a new procedure and process within the hospital. We also identified specific dynamics in leadership behaviour and interaction relating to discrepancies in clinical leaders' ability to sustain what they see as conflicting clinical and managerial roles. These two dynamics were reinforced by emotional responses that created distance and disconnection from organizational learning, which we refer to as 'arrested learning' and unintended learning'.

4.5.1. Feedback Loop

A major component of Crossan's 4I framework was the idea of feedback from individual to group to organisational level and vice versa. However, the empirical data uncovered in this case study showed that there were obstacles to that feedback. The obstacles then created a situation in which learning may stop altogether or be severally hindered.

Below is an adaptions of the 4I framework matrices (Dutta and Crossan, 2005; Crossan and Bedrow 2003). The diagram illustrates the progression in my thinking and understanding of how employees described the learning pathway for lean in the organisation.

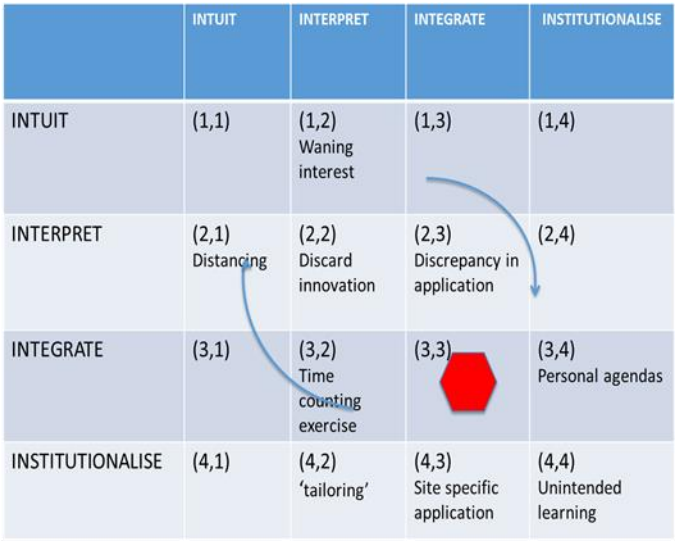
I sought the use of a pictorial representation to help explain how the themes and concepts interacted within the 4I framework. There is an interdependence between each of the levels of organisational learning. Crossan's stages of the framework represented different levels of organisational learning. Intuiting knowledge was done at the individual level. Interpreting began the cross over form Individual to group in terms of shared knowledge. Integration was done at the group level and finally institutionalisation happened at the organisational level. The theme of waning interest at the individual level turns into a propensity to discard innovation at the group level in Crossan's interpretation stage.

This study uncovered some interesting aspects of the interrupted feedback loops and learning somehow interrupted or stopped as I had first named it, unintended learning. The interruptions or missing steps add to our understanding that some other underlying context was at play in the organisation.

In Figure 8, I tried to depict the movement of learning in the different stages and levels of the4I framework. It shows learning moving form an individual level in the intuit stage to the interpret. Waning interest without any feedback from manager leads to distancing and discarding innovation when it gets to the interpretation stage of the framework. Likewise, if discrepancy in the application of lean is seen by organisation members in the Interpretation stage then at the integration stage, the learning is blocked.

Figure 8 is a schematic representation of my final findings from Case study 1.

The 4 I framework Study 1 (Crossan & Bedrow 2003)



	INTUIT	INTERPRET	INTEGRATE	INSTITUTIONALISE
INTUIT	(1,1)	(1,2) Waning interest	(1,3)	(1,4)
INTERPRET	(2,1) Distancing	(2,2) Discard innovation	(2,3) Discrepancy in application	(2,4)
INTEGRATE	(3,1)	(3,2) Time counting exercise	(3,3)	(3,4) Personal agendas
INSTITUTIONALISE	(4,1)	(4,2) 'tailoring'	(4,3) Site specific application	(4,4) Unintended learning

Notes on the 4I Framework

Although this research study was not entirely devoted to the 4I framework, it's important to note that some of the comparison of these phenomenon to the theoretical description of Crossan's ideas. These notations are related to the aggregate dimension and themes but specifically focussed on 4I and the possible implications this data from this study provides as comment on the framework.

We learned that there were aspect to the framework that were not well understood from the employee perspective. Employees did not always have the opportunity to intuit the new learning. Often employees were introduced to a learning concept at the integration stage. Furthermore, Managers seemed to have a great deal of control in the integration stage and room to change the implementation of an organisational concept. Factions of leadership were aligned to how the information was passed down to the employees. The result was a kind of 'aimless' learning that couldn't be relayed upon to project what the Organisational stated goals were.

Although the initial stage of learning stage is considered preconscious, many employees discuss the project details in terms of not being 'introduced' to an idea at the beginning so they could 'think through it themselves'. The ideas were 'forced' on them without any mental space to think about them. They felt they hadn't 'connected' to an idea and hadn't 'internally processed' the initial ideas of the lean methods. The examples illustrate some key difficulties at individual level that both affect and are affected by institutional level learning. The following items are explained: Absence of Feedback, Knowledge ownership, Organisational Myths, Fads & Fashions

4.5.2. Politics and OL

The politics and power relations that surround and pervade organizational learning are an intrinsic part of the process that researchers have to understand and appreciate (Lawrence et al, 2005). We are using Fleming and Spicer's (2014) distinction between politics and power. "Politics consists of activity that rearranges relations between people and the distribution of goods (broadly defined) through the mobilization of power. In turn, power is the capacity to influence other actors with these political interests in mind. It is a resource to get things done through other people, to achieve certain goals that may be shared or contested" (p. 240). This is because different political dynamics across the levels of the 4I framework are implicated in 'why some insights are institutionalized while others are not' (Crossan, Maurer and White, 2011: p. 452). Our research identifies three micro-political processes or 'triggers of non-engagement' that illustrate why some insights were institutionalized and some were not in HealthCo.

Below is an adapted version of Lawrence's (2005) vision of the political influence on organisational learning. I've taken the themes and concepts uncovered in the two studies to show how learning is interrupted by the political manipulation of information and feedback. Lawrence et al (2005) had previously proposed that discipline and domination would facilitate learning. In this study, discipline and domination seemed to arrest learning. It hindered feedback flows and knowledge sharing amongst group members. The domination of processes in this study was perceived by staff as unnecessary and counter to their work ideals of healthcare. Staff perceived the public statements that manipulated meaning through a series of statements, i.e. disfluency, to be a counter attempt on the part of management to undermine their work. The effect of not listening to staff concerns was to silence staff into a superficial compliance with new methods. They hadn't learned to do new things properly. They only performed new report tasks to the bare minimum of compliance. Management consultants contributed to discipline and domination by perpetuating the myths of Lean methods to senior executives.

Lawrence's (2005) article suggested that the addition of a powers and politics to the model gave a fuller explanation to organisational learning. Lawrence et al suggested that new ideas were dependent on 'interested actors' to put them into new work practices and routines and culture. This also had implications for access to resources for these interested actors. Social movement of information in interpreting and integrating new ideas into the organisation would be very much led by a political process. Information couldn't be shared without the possessor feeling compelled by moral persuasion or by organisational culture to share it.

This research does not distinguish between Lawrence's definition of power as either episodic or systemic. In the context of healthcare, the definitions of power are blurred (Cott, 1997, MCallin, 2001; Apker et al 2005). Peculiar hierarchical structure that are encouraged by regulatory requirement have an element of power, i.e. consultant, Registrar, SHO, Nurse, HCA, Admin. A nurse may not speak out against adoctor's orders (Cott, 1997). Equally the struggle between administrative process and medical ones present another unique power aspect (Hoff, 1999).

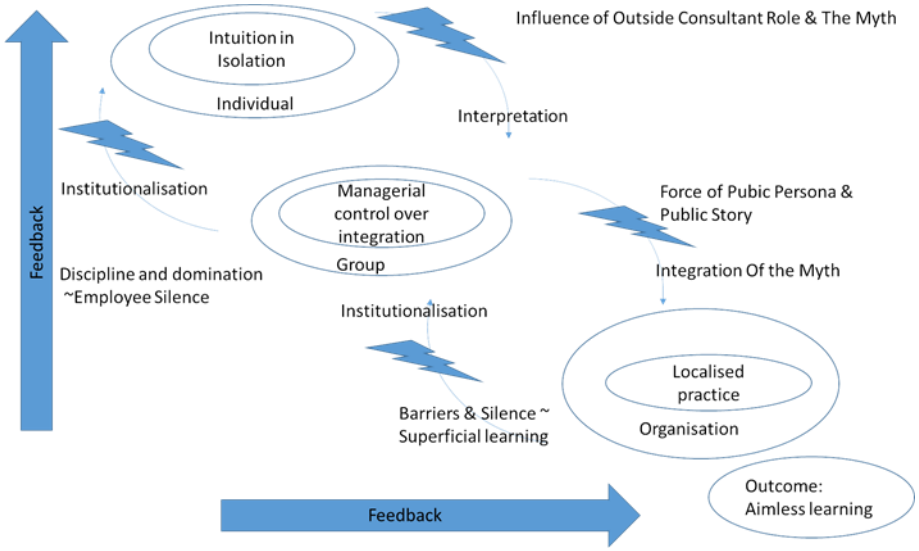
Our particular interest in the dynamic that power is influencing the flow of information in all stages of learning. Power led to information being withheld or manipulated so that what was learned was not the original intended message of the organisation. In particular they expressed the notion that 'legitimate interpretation' could be encouraged by a 'strategy of influence and force' (Lawrence et al 2005, p 184). The two strategies came in the form of discipline and domination but Lawrence et al (2005) explained this as a positive force to make the interpretation of ambiguous information for

employees more clear and thereby facilitating the sharing of knowledge and learning. These studies did not show a positive effect of influence and control by project or clinical managers.

Below is a schematic of how Politics may affect learning in an organisation and suppress learning.

Figure 9 is an updated pictorial representation of Lawrence et al (2005)'s schematic of political in organisational learning using the findings from Case Study One.

Figure 9 flow of Politics in Organisational Learning



4.6. Chapter Summary

This chapter laid out the findings from Case Study One organisation, Healthco. The data in this chapter formed the basis for a conference paper at OLKC during the PhD process. Through the analysis of the qualitative data, I arrived at the resulting three aggregate dimension which are: Triggers of Non-engagement, Arrested Learning and Role Conflict.

The analysis was done with backdrop of the 4I framework. At this this phase of the research, I felt there was natural synergy between Crossan's (1999) 4I framework as an explanation for how learning moved through an organisation and the phenomenon that was uncovered.

This chapter comprises the intact conference paper, with minor editorial changes, from OLKC 2013 which covered the period of my transfer viva of my PhD and the initial stage of my Data collection for this thesis. I wanted to show the progression of thinking in uncovering the qualitative phenomenon related to organisational learning. My initial strategy , as discussed in Chapter 4, was to relate all the phenomenon back to the 4I framework but it became apparent through feedback from my PhD viva that this was limiting to the data and my ideas. Therefore, I broadened the scope of both my data collection in Case Study Two and my analysis of the empirical evidence form Case Study Two.

5. Findings from Case Study Two St. Lydda's Hospital

5.1. Introduction

This chapter explains the concepts and themes that emerged from the data collected for Case Study Two, at St. Lydda's. After reflecting on my work for Case Study One, I wanted to explore the ideas of 'trigger for non-engagement' in learning and the idea of arrested learning. It was clear that some organisational conditions and individual's beliefs were barriers to learning. I had narrowly focused on the 4I framework in Case Study One. This focus had been useful to uncover that the implementation of Lean methodology was extremely complex and that it was not experienced uniformly by all staff. However, for Case Study Two, there was a much broader approach to exploring the experiences of organisational learning.

Using Study One as a springboard to understand how learning was moving through the organisation, Study Two looked more closely at the barriers to organisational learning and the perception of individuals who were part of a Lean Transformation programme. The explanations for the barriers of organisational learning come from many theoretical frameworks within organisational studies. I explore ideas in organisational change, organisational learning, and lean methodology. For example, silencing and distancing can find an explanation in the literature on organisational learning or the literature on organisational change.

This chapter explains the four aggregate dimensions: Discipline and Domination, Barriers (1) Organisational, Barriers (2) Employee Expectations and Integration of the Myths. Each aggregate dimension is explored for the relationship to organisational learning and organisational studies theories. Examples from the data for the themes that support and explain the aggregate dimension are given to illustrate the meanings of the dimensions.

I illustrate the overall picture of different levels and dynamics of change and learning within lean projects generally in St. Lydda's Hospital, as well as specifically within the Cardiology department. The chapter concludes with a summary of the salient points from the aggregate dimensions.

5.2. Discipline and Domination

This theme explains the idea that the organisation created messages to promote lean that affected how ornganisation members perceived Lean. It also covers how employees tuenrd ot slince as as defence mechanism perhaps to cope with the message about Lean. Participants in the Lean projects viewed Lean as a powerful influence. They perceived lean has having control over their daily work lives. Lawrence et al (2005) viewed this as legitimate form of strategy to interpret new information. However, employees viewed this as oppressive and having a negative impact on their performance . the influence came in the form of message put across to the rest of the organisation about the success of Lean (see section of the theme in5.2.1. Organisational Disfluency and its underpinning concept of misdirection of meaning and normative discourse of mixed messages).

5.2.1. Organisation disfluency

I created this theme after reviewing the content of presentations and corporate material. I recognised a pattern of using language to portray the organisation's Lean activities and the ACS programme as a success story. There were shortened statements to make employees believe a particular frame of the Lean story. Corporate media such as articles in bulletins made *one* case of success into the *ubiquitous* case of success. The Powerpoint presentations and speeches made a series statements that were true. These statements, if strung together, created a picture of Lean for the rest of the organisation. Shortened statements about the different rapid improvement or change programmes were essentially true for a specific instance but not necessarily the whole story. These linguistic gymnastics created a Lean *success narrative*.

The term disfluency is taken from speech and linguistic theories (Yu, Castel and Bjork, 2012) which I have applied to this particular organisational narrative (Gabriel, 2000). Disfluency pertains to interruptions in speech, and repetitions of certain parts of speech in order to create meaning. It also has roots in psychology that suggest that disfluency interrupts our cognitive judgment to understand the context of a situation (Yu, Castel and Bjork, 2012).

In psychology, the pattern of speech is studied for how it conveys meaning to the recipient. Disfluency is the deviation from normative speech pattern. It is mainly the use of prepositional and inflectional phrases that create a different meaning other than the factual truth of a situation.

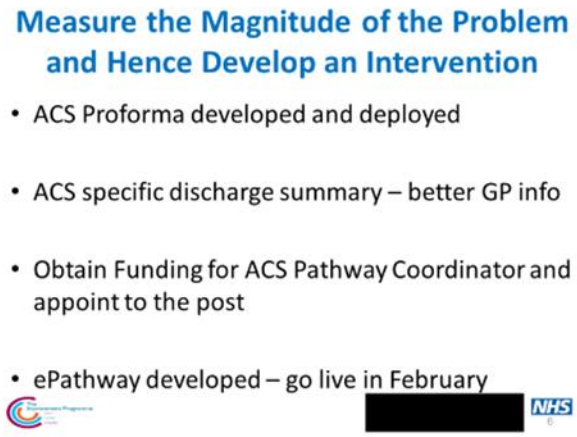
The 'human parser' can detect the disfluencies but disregards them in favour of the gist of the meaning in context. A person will overlook parts of information if it helps to produce a coherent story. "Garden path sentences contain a temporary synaptic ambiguity which causes the parses to build an incorrect synaptic analysis" (Ferreira and Bailey, 2004, p 232). The sense of the objective meaning is lost, and constructed meaning is proposed and developed. Two true statements uttered with a pause in between are likely to linked as the 'full story'. Meaning is inferred from information which may or may not be connected.

These kinds of linguistic gymnastics were evident in the information presented in meetings regarding Lean Methods and the choices in rapid change projects. Below is an excerpt from a presentation given externally to other NHS hospital by one of the lead Physician Consultants. He presented a view of St. Lydda as having improved the Cardiac care with an ACS proforma document. In this talk, KR promoted the idea that the ACS pro forma was new and had been deployed. This of course was only partially true. The pro forma wasn't being used consistently by all members of the medical teams.

The following example is a slide from a presentation given long after the Acute Coronary Project had begun. The lead cardiologist on the project made a presentation to an influential funding body that helps to shape policy and practice for NHS England. The funding body also provides leadership development for the NHS. KR, the lead cardiologist, told a story; a plausible story. He stated facts and figures about acute coronary care programme. His title beckoned the reader, it created tension, intrigue with the words he chose to use: the Magnitude and the Measure and the Intervention. The title held all the elements of a good novel, the doubt and the cynicism, the clouds of despair descended but still a way out for the hospital. A happy ending awaited the audience of hospital executives.

Figure 10 is a screen shot of the PPT given by the lead Cardiologist to external agency. T tells of a plausible story of how lean was being implemented at St. Lydda's

Figure 10 KR's ppt to External Policy Agency.



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The cardiologist rushes in with The Answer: The Proformas and the Discharge Plans. These are the New Things, The Invented Things. The guests are held with rapt attention. Funding has been obtained!. This, of course, is the golden goblet for any hospital executive. 'Obtaining Funding for the coordinator' statement was true in part. However,The funding was only for a fixed term and not even for the length of the project. The post was untenable and ill-conceived in its workload and responsibilities to the process of introducing the lean system.

In reality, 3 post-holders had held the post in the space of 18 months. The Proforma had not been developed specifically for the ACS project but had been created elsewhere. The discharge plan was also borrowed from another source. The e-pathway was given over to the software consultants and although useful information was obtained, the e-pathway did not fundamentally change how patients were identified in A&E before going to a ward.

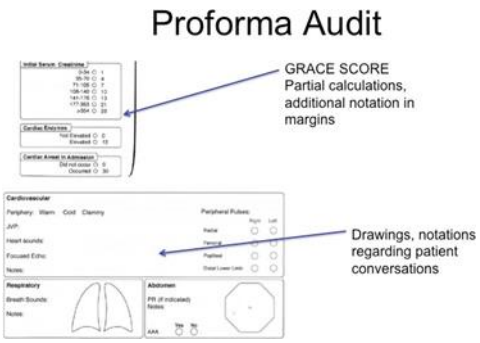
This was in contrast to data from the review of the proformas themselves. SHOs (Senior House Officers), Registrars and Consultants were not using them, so they had not been 'deployed'. Furthermore, it came to light in an informal conversation with one of the Nurses that the proforma had been used in a previous hospital by one of the Physicians and wasn't originated with the Lean project.

Below is an excerpt from feedback given to the Senior Board illustrating how the ACS pro forma was not being used to its fullest advantage. A GRACE score is a risk score to determine the severity of a heart attack and to guide the treatment options. This score was inaccurately calculated on many of the forms. ECG findings were necessary in order to assess whether a STEMI (elevated troponin hormone myocardial infarction) or an NSTEMI (non- elevated troponine myocardial infarction) heart attack had taken place. Initial treatment is similar, but a STEMI requires a PCI (percutaneous coronary intervention). It's vital that clinicians have this information. An ECG is very expensive method of obtaining this information, so the GRACE score is quick and cheap way of making the clinical decision. According to the review after the pro forma had been used and as mentioned earlier, the lead cardiologist would claim that the lean project had been critical in providing efficiency to the care that patients received.

Figure 11 is a screen grab from a presentation that I gave to senior executive at St. Lydda's. I explained that although the lead cardiologist other Service Improvement Project Managers were claiming the form a success because it was helpful in determining the cardiac patients form others

patients and helping to track their progress. My audit of the Proformas told a different story. The staff were using the forms but they were not completing them to an extent that they would be useful.

Figure 11 ACS Proforma for Cardiac Patients



During the course of the project, the meeting discussions and paperwork seemed to move away from the individuals whose job it was to care for patients and instead focussed on the bureaucratic wins that could be gained from re-organising the staff. The pro forma audit revealed some truths about the ACs project.

The origin of the pro forma form had two different stories. KR told the story of creating the pro forma for the ACS project to help identify the ACS and HF patients as they arrived in A&E. It was also designed to help identify the severity of their episode. KR wanted the SHOs to use the pro forma to record all the data about patients admitted with ACS related symptoms.

The other story was told by another cardiologist one that was in charge of the SHOs training. ZA wanted the SHOs to use the pro forma to learn how to recognise ACS related symptoms and reduce their time to diagnosis. ZA wanted the SHOs to learn how to diagnose quickly, efficiently and improve the quality of their clinical decisions.

The chief cardiologist of the project did have a desire for the SHOs to record the coronary events in the pro-formas as they had been written. However, even this had a personal agenda attached to it. He wanted to them to record that information so that he could use it for larger study that he was conducting. There were numerous benefits to the patient regardless of the physicians and management consultant's goals. But because there were differing ideas about how to use the final pieces of information, e.g. some tests and measurements were deemed more important than others.

Enzyme levels, risk factors were recorded differently from patient to patient. The critical information was passed from emergency room clinicians to cardiology by use of tacit knowledge and custom and practice. This negated the use of the form, but still it maintained high levels of patient safety and care.

We were 8 months into the project before the head registrar found out that "SHOs were not properly trained", they didn't even know their education supervisor and had very little contact with their senior registrar and had never had the pro forma explained to them.

The stories told by the clinical leads created meaning for Lean as a success but as the example illustrates that was far from the truth.

Misdirection of Meaning

This theme was created to describe the way the organisation was using information about the Lean projects selectively so that employees were directed to think Lean would solve most problems. This theme explains how the organisation used project examples to ascribe importance to lean and specifically lean *success*. This is more that use of rhetoric and language as described in organisational disfluency because misdirection of meaning was used to conjure a particular version of the abilities of lean to change and transform the hospital and the importance of Lean in learning new systems.

This theme is similar to organisational disfluency but instead of just the statements that are strung together to create meaning this is a larger aspect. This theme was devised to represent how different kinds of corporate materials such as publicly available scoreboards, project timelines, plasma screens with slide shows and short videos were put together to direct employees into believing Lean was a success and a worthwhile project. It also pointed employees toward believing that the content of projects and the goals that would be met. For example, large project timelines that were displayed on boards in hallways of the hospital (that particular photo is used to illustrate the theme of Fads and Fashion in section 5.5.3)

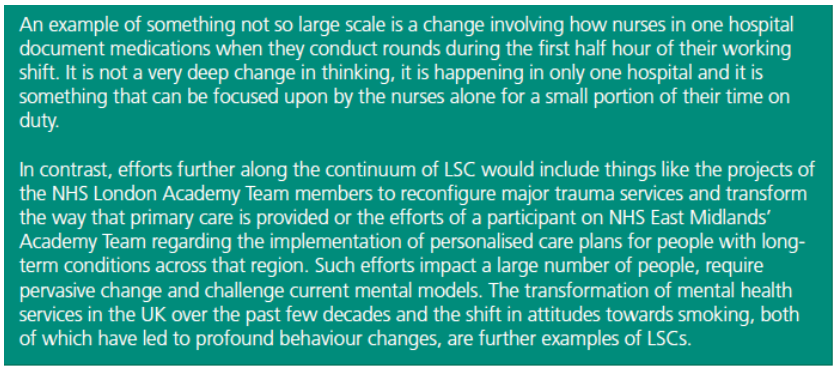
Directing employees towards a show case of success stories and examples of on-going projects in St. Lydda's created and maintained a façade of lean expertise and efficiency. Misdirection occurred to show lean as an immediate and concrete solution to the hospital's inefficiencies.

The Hospital senior executives wanted to influence St. Lydda's public image by promoting themselves as a Lean Hospital. In public talks and media imagery, the hospital presented itself as undergoing renewal and focussing on continuous improvement. The Chief Executive gave a public talk to hospital executives/managers and gathered interested parties in which he gave examples of the benefits being derived from lean projects. The message was that Lean was helping to change St. Lydda's into a more efficient hospital. This put St. Lydda's in a good position to gain foundation status and be used as an exemplar to service improvement . To that end, Plasma screens were placed around the hospital to show the 'success stories'. Additionally, these plasma screen were used to solicit idea from staff on new projects.

The presentations about Lean were not restricted to St. Lydda's stories. Senior executives also used examples form other NHS institutions to show the positive aspects of Lean in a Healthcare setting.

Figure 12 is from a PowerPoint presentation that was given to service improvement project members and organisations members invited to participate. The audience was made up mostly of service improvement project people but also had a wider hospital employee presence. The presentation recounted the impact of Lean successes in other institutions on their organisational culture. The presentation explain about a nursing project conducted through Lean transformation that helped with drug counts and another project that helped with the Trauma team. These stories almost exclusively talk about the success so that Lean was viewed as a positive force.

Figure 12 Powerpoint of Success Stories in a Lean event



Stories have the power to promote self-belief. In this organisation, stories about the fledgling success of initial projects served to underline the importance of the new lean endeavours. Stories about the success in other hospitals provided a sense of competition and urgency for change (Gabriel, 1991; Connell, Klein and Meyer, 2004; Grant, Keenoy and Oswick, 1998, Marshak, Keenoy, Oswick, Grant, 2000,).

A high profile Launch event to help persuade individuals within the organisation that lean would be good for the NHS took place after lean project had already begun. It was about six months into the lean transformation. A leading change expert in the NHS was the key note speaker. She highlighted the success from pilot projects at St. Lydda's such as the RCP in paediatric surgery were used to illustrate the benefits and cost savings that lean can have in an organisation. The 'Are you Ready' event and 'Lean Show Case' meetings were attempts to provide clarity for the staff at St. Lydda's. however these meetings were by invitation only. Many ward Nurses were not allowed to attend as their managers dismissed the idea and deemed the meetings as not being necessary to attend. The attendance level was high but consisted mostly of service improvement staff, not the ward staff that carry out the procedures which were being changed by lean programmes..

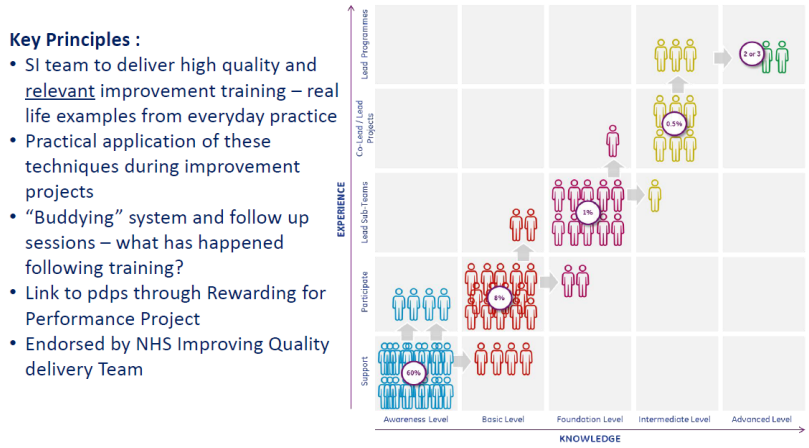
Another high profile NHS change leader spoke about the need for change in the NHS and how St. Lydda's could improve efficiency and patient outcomes through Lean. Most of her external examples were about the clinical and executive leaders in the organisations and their ability to drive lean. Lean was presented as the solution to almost any problem in any hospital.

Below are excerpts from a Service Improvement Team presentation. This example was meant to encourage staff to think of Lean as building up from the ground floor. A' buddying' system promoted the idea that all members could contribute to Lean and that Lean was something 'fun' to learn. Service Improvement as a separate team entity within the hospital was a new concept. This introduction of an SI team formed part of a narrative context to create legitimacy as part of a rhetorical strategy of Lean. Naming the individual projects as part of a Performance Project plan gave additional support to the notion that all these project were connected to greater improvement for the hospital as a system (this idea is reinforced in the example used for the Fads and Fashion theme in 5.5.3 and the example used for Waning Interest under the Malady of malaise in 5.5.4.) . Invoking the NHS Improvement Quality made St. Lydda's project seem as though it was connected to all other NHS projects.

Figure 13 is a slide from an Introductory slide form a What is Service Improvement? Presentation and What are we doing in St. Lydda's?. it shows Service Improvement as being embedded as part of

the everyday business of St. Lydda's. The service Improvement should be looked upon as any other team in the organisation.

Figure 13 Service Improvement Team slide 'what is SI & why are we here'?



Organisation have enormous power to create a narrative in the minds of their employee through PowerPoints and Organisational materials. The repetition of a message can be either positive or negative.The difficulty for the organisation is maintaining that narrative if the product does not live up to expectations.

Funnelling information

This theme was a further development and refinement of the way in which St. Lydda's used information and corporate documents and media to create cognitive bias towards Lean as problem solving. Funnelling information is about creating a story out of experience (Tversky & Kahneman, 1974; Kahneman, 2011). Other researchers have explained the importance of stories in sense making in organisations (Gabriel, 2000). This theme is a sub element of the story making in that it explores how information was promoted to persuade employees' cognitive bias toward Lean. Kahnmen suggested that stories have significant events and endings. St. Lydda's was using the tendency of cognitive bias to create personal and bureaucratic stories and used information to guide employee's beliefs. Public presentations, posters, plasma screens with rolling vignettes about Lean achievements were placed around the hospital. Lean awareness became part of the Induction for new employees.

The use of the funnelled information is an illustration Boje's (2000) idea of 'anti-narrative'; that is a story told with an incoherent narrative. Different kinds of narratives enforce types of thinking and conclusions. For example, Boje (2000) uses the notion of personal narrative versus bureaucratic narrative. A personal narrative is insufficient to overcome the bureaucratic narrative (Boje chapter 2 in Holman & Thorpe book). Rationality is favoured over chaos. Some ideas are promoted and others subsumed into impracticalities; "personal experience narrative is in-admissible, reshaped and fragmented or surrendered" (Boje, in Homan and Thorpe 2000, p48). St. Lydda's created a bureaucratic narrative for the purpose of subsuming personal accounts of clinicians. The hospital executives used a coherent narrative about success to convince clinicians and al employees that implementing Lean was the right thing to do even if it meant changing the way they had always worked.

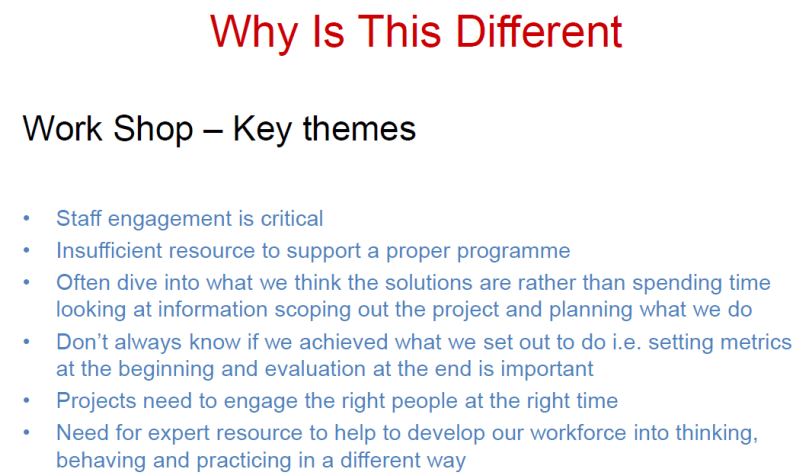
Whittle (2010) suggests that although an institutional actor may have already sanctioned a change within an organisation, it doesn't mean that the individual actors in the organisation will consider it a fait accompli. Change is required by change agents through a concerted discursive effort is need to make the change of innovation more palatable to the organisational actor (Whittle, 2010 p 17). Whittle's research suggests that organisational change is reliant on funnelling of interests rather than just a fixed change in practices.

Previous research has shown that discourse has played a role in giving voice to competing parties. The differing 'sides' use information and its publicity to strengthen their own argument. This example for this theme describes the funnelling of information for the improvements projects that have already been made. The executives, as organisational actors, describe how the breadth of Lean methodology is already in use in other hospitals and throughout St. Lydda's.

The funnelling of information was achieved by managing attendance lists at meetings; choosing particular interested actors for the service improvement team. In addition there were secondments from clinical work for defined areas of improvement. The SI team had midwives, physiotherapists, cardiologists, speech and language therapists, pharmacists, paediatricians, and nursing staff. However access to minutes and access to meetings altogether were controlled by the lead managers and executives as part of the entire SI process improvement. The information in the SI improvement meetings was presented in such a way as to represent the projects perpetually moving towards the desired goal. Even when the goal shifted, the minutes and notes of meetings would reflect the desired rhetoric of the moment. The institutional actors were using the rhetoric as symbolic action towards the goal of Lean adoption and lean learning.

Figure 14 is a slide form a workshop to train new project members before they embark on a rapid change programme. It outlines the steps of how to win 'hearts and minds' of the staff over to a Lean way of thinking. It's the rhetoric lean can do anything theme. The advice was straightforward and positive and engaging. Typically, some staff were cynical from the beginning. but some were quite enthusiastic as to the promises that lean might fulfil.

Figure 14 SI Improvement Training – Engaging people in the rapid improvement teams



The people aspect of Lean was discussed in training and other presentations. The promise of the rhetoric of the CG presentations and Senior Executives was that people would be accounted for in the lean transformation. These presentations were given at the beginning of projects and the Launch of the whole programme.

Normative discourse of mixed messages

This theme was developed to explain how the messages from senior managers influenced the learning in the clinical teams. It covers the dynamic of paradox (Smith and Berg, 1987) and social construction of change of organisational knowledge (Luscher, Lewis and Ingram, 2006). Each actor wants to preserve their comfort by maintaining their conditions but they also crave change. Managers want to encourage the adoption of new routines and enhance the collaboration between nurses, A&E and cardiologists but they cling to the security of old methods (Luscher, Lewis and Ingram 2006).

Crossan Maurer and White (2011) had described learning of shared meaning as a kind of dialogue that would convey meaning and shape action. This disconnect I observed was that the intended shared meaning was the public face of the 'lean' change and the subversive dialogue that existed between employees created a different shared meaning. There was a pattern of contradiction in both verbal and written communication. Paradoxes were in the statements made in meetings with one intent and statements made outside meetings with another intent.. There may have been an acceptance of idea in a meeting but then when a nurse tried to action the idea, they were met with resistance. Managers were espousing change but undermining it in meetings by use of inflections and intonation express true meaning opposite to the stated goals of senior executives. As previously mentioned, many meetings and meeting notes were slanted to present the Lean projects as always being successful and geared towards the desired patient outcome. Managers used persuasive language to build ideas around using lean as a method of change and that all ideas were welcome. Managers also used persuasive and declarative language to express the idea that change was already under way for the improvement of patient outcomes in the Acute Coronary syndrome project.

A nationally known change leader was brought in to the organisation to promote change management ideas. This was purposefully constructed narrative to reinforce change as positive and natural part of an organisation's development. The purpose of the launch day was to create energy for adopting and learning new Lean methods. The attempt was to reframe meaning for a specific organisational message (Vince and Broussisine 2000).

This example illustrates a promotion of a concentrated focus on lean methods as part of change, and change as part of learning. That narrative created is that Lean will have a positive effect on patient outcomes. Learning lean is necessary. Organisational change is a learning process. In order to be able to learn new thing through lean some old methods will be adapted, others will need to be unlearned or discarded in favour of the new.

Individual learning is amalgamated into 'collective learning' leading to change in institutional processes (Rampersad, 2004). The goals of the launch day learning as a natural part of change align closely with Dodgson's (1993) idea of learning as part of 'adaption' and efficiency improvement. HB was trying to present the idea of change as inevitable, flowing and continuous. As a contextual issue, change and learning are inextricably linked, learning new things changes something; attitude, skill, behaviour or knowledge. (Armenakis & Bedeian, 1993). HB was trying to get all of the clinical leads to see learning new medical procedures and guidelines as the inevitable part of changing

medical care. If change were appreciated and lauded, then changing to new lean methods would create an image of improvement and efficiency (Gioia & Chttipeddi, 1991; Maitlis & Lawrence, 2007). Ideas for new projects were solicited form employees (Flinchbaugh 2008, Hu, et al 2016).

Figure 15 is the schematic that I re drew whist listening to an external expert on lean. HB gave a presentation on one of the Lean awareness Days at St. Lydda's about all her personal successes with Lean transformation. There were a t least 100 people in the audience form St. Lydda's. She was a charismatic speaker with amiable and friendly presence. HB focussed on how lean and change management Principles were aligned and mutually sustaining.

Figure 15 My notation 'drawing' from the Presentation by HB

Anatomy of change and	Physiology of change
The shape and processes of the system Detailed analysis How components fit together	Vitality for life giving force stage enable the system And its people to develop
Processes and structures	energy for change
Measurement evidence Improve clinical performance Reduce waste Redesigning pathways	Create hope Deeper meaning for change Calling to action

The ideas that were being given to staff were all about 'creating hope' and that staff could find deeper meaning in their work through Lean transformation. Some Staff id think that all was possible with lean. Of course, I have the benefit of hindsight in the analyse which makes me sound cynical. The impression that the presentations and message was that Lean was a good positive thing.

Below are some further notes from the field diary on how the 5 energies of change as explained by a Lean NHS expert. All of them are expressed as positive force for change.

Excerpt from Notes on a Lean Awareness Day

> *The 5 energies of change*
>
> *social - energy of personal engagement, relationship and connections, feel of sense and them*
>
> *spiritual – energy of commitment to a common vision for the future, driven by shred values*

psychological – energy of courage, resilience and feeling safe to do things differently

physical -

intellectual - NHS improving quality online tool for assessment for their energy for change

I took these noes while HB was talking but I was also looking around the room to see if people actually believed it. There were some enthusiastic nods and verbal affirmations. Most of the positive feedback was from the Consulting Group's staff and form the Service Improvement team. Some clinicians, identified by their medical scrubs or name tags, were sitting defensively with arms and legs crossed, chin jutting out and hard looks on their faces.

I made the notes below some time after the event. I was reflecting on the things that had been said to staff and the comments that were made to me in subsequent lean projects.

Excerpt from my field diary notes

The stories we heard were as powerful as the data we collected. I sat in those meetings and listened eagerly, I wanted that enthusiasm to wash over me and see this hospital change for the better. A lot of things happened to me while I was there in the hospital, I embraced the stories that were being told. We were getting better, we were getting more efficient!, The cardiac patients were headed for rehab, the CCC nurses were seeing progress with the patients. But then you started to peel back the layers, when asked to provide evidence that the progress they were making was sustainable. It turned out that the progress was mostly propaganda.

In the early stage in the Lean transformation, there was some enthusiasm for Lean and what it might do. However even in those first projects, some members of staff start to tell a different story. Below are some of my notes from the quote form the CCC Nurses on the rehab team. I wrote these field notes after the event.

"link nurses in each ward to support discharge process" Message message from the presenter about a lean launch project-

and this is the comment as heard by me from a member of staff

'*well this wasn't true 2 months later , maybe it was true at the time'* (CNZ after the Launch Day with HB)

"subjective discharge encouraged greater patient ownership" - Message from the presenter about a lean launch project

this is the comment as heard by me from a member of staff

there's no evidence of this. Patients still wait to be discharged for idiosyncratic reasons - (CNZ after the Launch Day with HB)

at each comment from the presenter, the clinical staff member is heard dissenting form the 'facts'. Lean was beginning to be seen as having two sides, the public positive side and the darker 'real' side.

There was a tendency to over-state the successes and ignore any problems. The consulting group did stay in the hospital very long and therefore did not follow the groups to see if sustainable change had been made or if the learning had indeed been embedded in the organisation.

The Hospital continued its theme of portraying itself as an exemplar for Lean methodology. Towards the end of my tenure, the hospital ran a 'Perfect Week' exercise. This exercise involves observations on every single ward for every single shift for a week. Various data are collected on discharge times, bed moves, patient wait times, patient transport, discharge lounge, communication between department e.g. A&E and Wards) etc. This data was so interesting in contrast to the messages that had been fed to staff during my time as a PhD intern.

The stories and the discursive norms were being used to create Lean as learning, lean as change, lean as problem-solver. At the same time, the personal discursive norms were being created: Lean as a hindrance, Lean as separate from daily work, and lean as an unwanted influence.

5.2.2. Silenced

This 2nd order theme was created to describe how the presence of 'silence' of employees true feelings and beliefs in favour of an organisationally accepted narrative; that is employees not voicing their opinions or ideas in meetings hindered embedded learning. Silence was not an active choice but a response or reaction to feeling or being supressed.

This theme describes examples of both acquiesced silence and defensive silence (Van Dyne, Ang & Botero 2003). This theme also captures the idea of silence as part of tacit-ness (Blackman and Sadler-Smith, 2009). It also explores the idea that silence is a barrier (Bogosian and Stefanchin, 2013; Blackman and Sadler-Smith 2009). Clinicians in the service improvement teams were given a 'voice' to be able to discuss concerns about the rapid change projects or the lean programmes. The experience of these clinicians was that they put forward a message, it was often rejected in favour of an already determined course of events.

When Clinicians asked the service improvement project members questions, the answers were socially accepted version of events. In addition, Questions were not encouraged in meetings by the way. Meeting members understood this by the way in which service improvement project managers phrased things.

Statements were made predicated on assumptions about the viability of Lean success. The organisational narrative of Lean as a success was more important than the desire for 'real' change. Below is an example of how people were commenting about meetings. That there were meetings outside of meetings and that had no real input into learning or change.

> Field notes from conversation just outside the meeting
>
> *JGr (this person sat next to me in some of the meetings and on this occasion leaned over and whispered comments to me about what was*

being said) "oh here we go again, that's now hat's happening, we can't even get the forms, and they're not filling them out anyway, they're dreaming if they think things have changed"

This is a classic example of the way People use defensive routines in organisations to protect themselves against rejection (Argyris,1978). They keep silent in an effort to save themselves from being associated with a bad idea or a failure. Individuals distance themselves from ideas and projects that they think will fail are not part of the organisation's ethos or are not part of what they view to be the core of the organisation. They felt silenced from superiors who wish to promote a view of the organisation that may not necessarily be the most accurate one

Below are some further notes from the field diary form a conversation had just outside the a meeting in which presentation and talks about lean projects and successes so far.

Field notes from conversation just outside the meeting:

CNZ "I don't care what's said in there, we're providing good care, just like we always have done and trying to pay attention to that stuff" (that stuff refers to the pro formas and electronic tracking of patients- although this is a nurse who diligently fills out the forms but uses the old system of bed notes and med notes to make clinical determination) she won't say anything publicly in meetings or 'on the record' because she wants a 'quiet life' (CNZ is a cardiac care nurse)

At the same time the employees were bombarded by messages and images of the organisation's making. One begins to see the division taking place. Senior executives saw lean as success and others in the organisation saw Lean as a hindrance.

(Excerpt from Field notes; interview with Rehab Nurse CK)

"it (the pro formas) was her idea – she used it another hospital in her previous post…KR had an idea for a research project and he was using this to investigate the idea, it wasn't bad idea, it was good, you know for the patients, but still it was what he wanted to do isn't it?, as a group I mean….CG had something to prove because they wanted to their system elsewhere in the NHS" "Of course patient safety was paramount but we could have gone about it differently, and from where I sit we were already doing the medical bit"(CK cardiac nurse –

CNZ and CK were both on the ACS lean project team. I came to know both of them very well. They had the same first name so I had to distinguish their identifies in my notes by their initials. Quite frankly, in the beginning, I did get them mixed up but they were both cardiac nurses and had the same sentiments about Lean and it benefit to patients. One of the nurses was from New Zealand so those are not her real initials. She no longer works at St. Lydda's, she emigrated back home just at the end of my time at the hospital. CK explained that the ground breaking idea for a pro forma to identify ACS patients had been a consultant's idea where she'd used it in a previous workplace. The idea did not originate from the Consulting Group nor was it an idea generated from Lean. However,

the pro forma was publicly announced as a Lean idea. These stories continued with CG making public presentations to staff and other NHS hospitals claiming success of different projects.

Staff were reluctant to go 'on record' to complain about lean. Because I was a 'fixture' in the hospital, they spoke freely to me offline, having coffee, in hallways, etc. Many pieces of information were relayed in the form of 'hallway whispers'. In fact most of the 'real' information about the project was relayed offline. If it had been a play it would have been an 'exit stage left on display' conversation for the audience to see the irony of the situation.

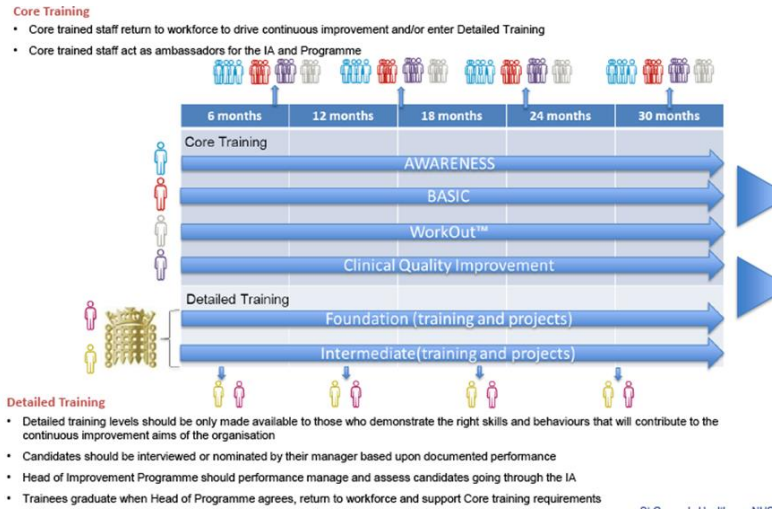
Socially accepted message

This theme draws on the ideas of legitimate accounts of identity and social practices (Creed, Scully and Austin, 2002) and the interplay of organisational rhetoric and identity to create cultural tomes (Meyer and Scott, 1983). In this case, 'Lean acceptance' as the ideal. The 'social practice' of the consultants describing St. Lydda's as an exemplar case for Lean led to the adoption of the Lean ideas (Strang and Meyer, 1983). In general, the St. Lydda's clinicians mostly regarded Lean as a manufacturing tool and not appropriate for medicine. The strategy by the CG and the senior executive was to talk about Lean as part of the cultural and social fabric of the hospital. Presentations, meetings, social networking events within the hospital all contained an element of social discussion of lean as a positive step for medicine. This is consistent with previous research that Lean was evolving to be seen as part of social system (Hines, Holweg and Rich, 2004).

CG presented themselves experts in field 'teaching' lean, and often quoted from an HBR article on leadership, St. Lydda's was creating a social structure (Wenger, 2010) to identify itself as a 'lean' hospital (Ferlie, 2002; McCann, Hassard & Hyde 2013). St. Lydda's and the CG created Powerpoints and posters and talks in the 'process of meaning making' (Wenger 2002).

Figure 16 is one of the Lean Awareness Slides initially given at Lean training. These slides were then incorporated into Induction slides and Lean Introduction. The slides were used to assimilate both new and existing employees to the ideas of Lean and how it would function as a tool and a project within St. Lydda's. They became part of the fabric of the organisation. The ideas of Lean were being embraced certainly by the management of the organisation.

Figure 16 Core Training with Lean PPT slide



5.2.3. Role of Management consultant

This theme was included to highlight the influential nature of the relationship between the Consulting Group (CG) and St. Lydda's. There were multiple levels of influence on various projects. I take a critical view (Werr and Styhre, 2002) of the Consulting Group (CG). In my examples for this theme and subsequent themes, the Consulting group is illustrated as "manipulator of symbols in order to create impressions of value" (Werr and Styhre, 2002, p46). Consultant tend to serve a dual role both as support and influencer. Executives in an organisations look to the consultants to develop strategy and plans and to educate about change management (Scott, Barnes and Wanger, 2012; Chun & Mooney 2009; Fincham and Clark, 2002). When proposing a change, the consultant is viewed as an influencer (Scott, Barnes and Wanger, 2012). CG were an external group but were embedded into the internal Service Improvement group which gave them the opportunity to act as internal consultants enjoying special privileges of information, access and influence (Scott, Barnes and Wanger, 2012). Management consulting can encompass so many different activities but of particular importance in this case study are the activities of change and learning. A standard approach to consulting is to undertake a process of data analysis, diagnosis then advice to implementation. Consultants facilitate learning about new ways or working and new concepts (Scott, Barnes and Wanger, 2012).

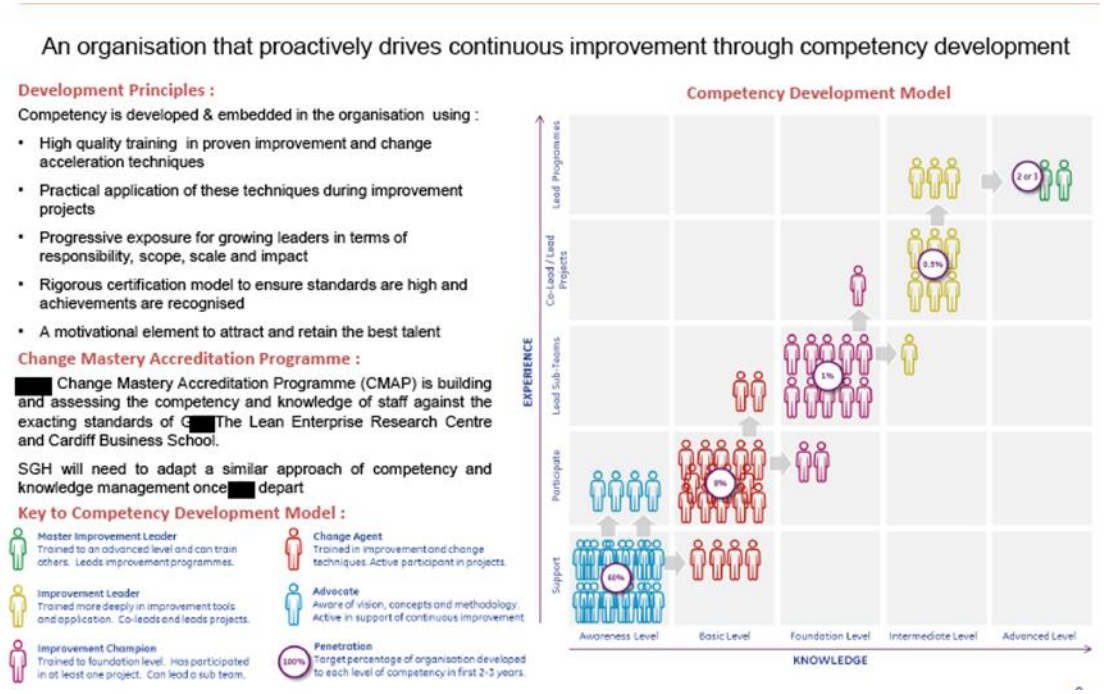
As internal consultants, CG were in a position to manage change and learning by gathering data and interpreting it on behalf of the Service improvement team. This, of course also means that CG could manage and manipulate the situation (Werr & Styhre, 2002). St. Lydda's senior executives and service improvement management group became increasingly dependent on the CG for information analysis and strategy choice whilst ignoring the data reports and opinions of their own employees. The Consulting group was regarded as the authority on how to improve care for the ACS patients.

Below is an excerpt from a presentation given by CG explaining the care system for coronary patients. CG had reviewed the hospital SLAM data and shadowed clinical staff for a day (literally a single day).the dominance of the opinion of CG's experts was incredulous. They had only shadowed the clinicians for a very short period of time. Yet they were purporting to have expert knowledge of the situation with cardiac patients. They used information from NICE and British Heart Foundation to bolster their arguments. This was information about lengths of stays and patient outcomes that was publicly available before any of the lean programmes even started at St. Lydda's . The Consulting Group made itself the expert on the care pathway. They spoke with assurance and conviction making the senior leaders in the organisation feel comfortable with their ideas and project outlines. Senior executives accepted these explanations but it was not enough to convince clinical staff who did the daily work on the wards.

CG visiting project managers were emphatic in their explanations. In the interview excerpt below, we see the clinician explaining that CG tells the staff they need to 'live' through kaizen to really 'get it'. CG introduced all vocabulary and concepts of lean. It was meant to get everyone using the ideas and concepts. However, it turned out to be 'validation for a few key members of staff'.

Figure 17 is from a presentation given to show that organisation success can be achieved through competency . Furthermore, competency can be achieved though Lean. It just another example of how CG and the Senior Executives created the idea that Lean would help individuals to become better people and to solve the problems of the hospital.

Figure 17 Competency through Lean Powerpoint



These slick presentations can easily convince a new members of staff that once competent in the principles of lean they can solve all problems.

Further example of the influence of Lean came from the presentations of decision on the Lean projects. The CG made much of their achievements made at other hospitals. The management consultant who created the ICP programme was a statistician but he was the one that chose selectively what would be included in the ICP projects.

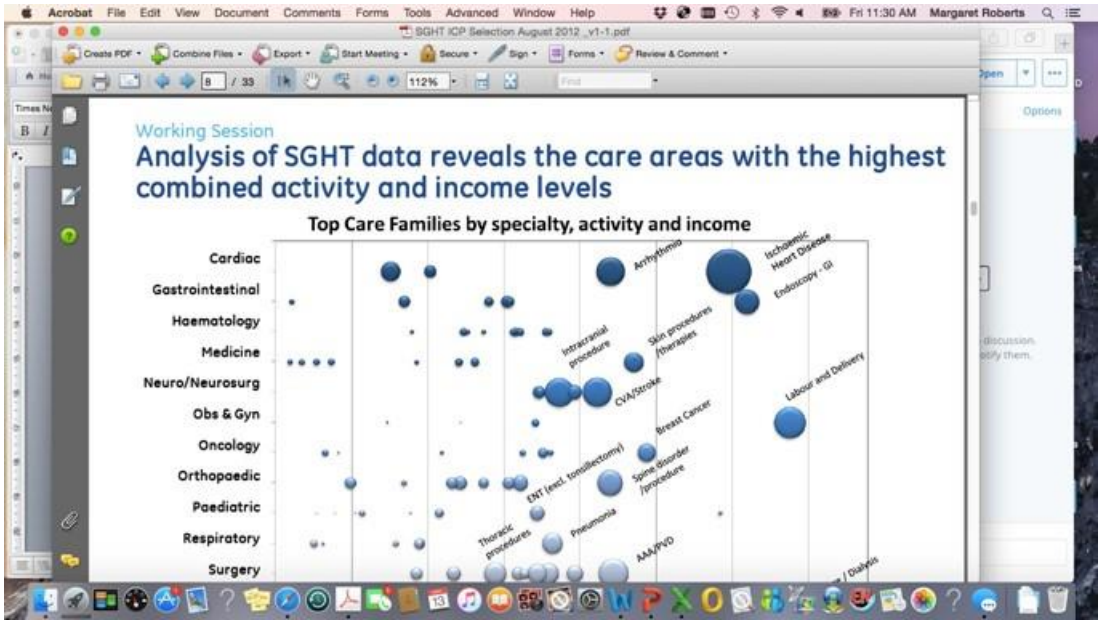
In selecting the ICP CG 'presented an analysis of Trust Data to support selection of the pathway and collectively agree which area of the hospital to choose for Lean work'. CG had full access to the trusts SLAM (service level agreement measurement) data. This data is used to determine repayment of Tariffs from the authorising agency, e.g. CCG (Commissioning Care Group). CG would not fully explain how they selected the data. They did not use all years and all patients. They used selected months from the previous 5 years of data for each morbidity. For example, Congestive Heart Failure, they kept in tight age ranges and time frames without readmits.(Source: Field notes and Hospital ERM data). CG analysts grouped the data into 'care families' and balanced that against incidence and 'bubble volume' or annual income. An associated 'activity rank and income rank' were used as determine factors in choosing the projects.

Although there was only one physician on the CG team, the task of analysing and presenting the KEY determinants for the Lean Improvement projects feel to CG. Below is a screen shot of a powerpoint presentation given to senior leaders in the hospital explaining the need for change and new procedures. CG was seen by senior management at the hospital as an expert in data analysis, lean, project and change management. CG was never challenged about their ideas, findings or reports.

In CG's presentation to senior leaders they gave their interpretation of data supplied to them by St. Lydda's but analysed by their own consulting group staff. The Consulting Group chose the data to use in the comparisons, for example: the number of patients, type of patients, time frames, year on year comparison, etc. St. Lydda's internal staff did not check the data or methodology used by the Consulting Group. It was assumed that all data were correct, and that the interpretation of the problem was sound. Below are some excerpts from the presentations given by the CG. Again, the role of management consultants is discussed and developed in the analysis section.

Figure 18 is a screen shot which shows the analysis slide given by CG to the executives at St. Lydda's. This is important because later in discussions with St. Lydda's own clinical staff, it turned out that there were different views on which sets of data should be used and how one would measure the success of project. CG wanted to concentrate on Length of Stay but the clinicians had first envisioned tackling the problem of discharges and return to Rehab. Of course, length of stay is related to these issues, but they still have different concerns.

Figure 18. Consulting Groups reasons for choosing Lean Projects



To accompany this slide and give further understanding to the different message that were getting through to staff and what staff believed, I have include some of the field notes below on how CG came to be able to choose the project that St. Lydda's would do.

(Excerpt from field notes conversation with CA from CG)

> *CA explained that: "proxy quality measures were created to show comparisons between different morbidities". CG chose the proxy quality measures not the hospital. The decisions were based on financial information not necessarily patient outcome. The Lean measurement was about increasing productivity and reducing cost not quality aims of improving patient care. The driver is financial.*
>
> *In another example, CG analysts grouped the data into 'care families' and balanced that against incidence and 'bubble volume' or annual income. An associated 'activity rank and income rank' were used as determine factors in choosing the projects.*
>
> *CA from the CG explained that: "proxy quality measures were created to show comparisons between different morbidities". CG chose the proxy quality measures not the hospital. The decisions were based on financial information not necessarily patient outcome. The Lean measurement was about increasing productivity and reducing cost not quality aims of improving patient care. The driver is financial gain of reduction in length of stay; ££ saved field notes - The data 'show' that took place had the software consultants giving us an overview of what could be done " a comprehensive health record platform that acts as a single source of truth for clinical, operational, and financial transactions" as in the tariffs that are charged for procedures. Below is an excerpt from field notes of meeting with the procurement team for the software developer.*

This became important when instituting lean when the message given to the wider audience was that patient outcomes would improve. However in the public "trust- wide communication of selected ICP" were reported as a joint decision between Clinicians and Management and driven by patient improvement. The discussion that followed was to decide which clinical project would be taken on. The Executives along with the CG decided on the 5 RCP (Rapid Change Projects and ICP (Integrated Care Pathways). Acute Coronary Syndrome was among the top 5 projects to be chosen. Hereafter, the decision was made public reporting that it was a clinical decisions about the care not necessarily about the finances.

Consultant as Expert

This theme pays particular attention to the role of the consultant as the knowledge expert creating value. Consultants are seen by the client as being able to provide objective advice and expertise (Werr & Styhre, 2002, Alvesson et al, 2002). St. Lydda's executive team saw the Consulting Group (CG) as the the validator and external authority. St. Lydda's used all the CG data and strategic assumptions are the Lean Implementation project. CG was driving the goals of the projects not the clinicians. CG were based in the Service Improvement team office onsite. Their presence gave credence to the improvement work for the chief executive but wasn't necessarily helpful to

clinicians. The two internal leads on the project had personal career goals they wanted to achieve in becoming freelance consultants themselves.

The Management Consultant was the validator (external authority/expert). – St. Lydda's used all the CG data and assumptions to being project and not letting the clinicians drive the goals an outcomes - couple of assumptions here; CG were based in the SI office; Their presence gave credence to the improvement work for Miles but wasn't necessarily helpful to clinicians. Ronan and Peter had personal career goals they wanted to achieve. Below is an except from a presentation given by CG explaining the financial model. CG had reviewed the hospital SLAM data and shadowed clinical staff for a day (literally a single day). Using this information and publicly available information from NICE and British Heart Foundation. The Consulting Group made itself the expert on the care pathway. They spoke with assurance and conviction making the senior leaders in the organisation feel comfortable with their ideas and project outlines. Senior executives accepted these explanations but it was not enough to convince clinical staff who did the daily work on the wards.

CG visiting project managers were emphatic in their explanations. In the interview excerpt below, we see the clinician explaining that CG tells the staff they need to 'live' through kaizen to really 'get it'. CG introduced all vocabulary and concepts of lean. It was meant to get everyone using the ideas and concepts. However, it turned out to be 'validation for a few key members of staff'.

Although there was only one physician on the CG team, the task of analysing and presenting the KEY determinants for the Lean Improvement projects fell to CG.

Figure 19 is a screen shot of a Powerpoint presentation given to senior leaders in the hospital explaining financial data model for Cardiac rehab attendance. CG was seen by senior management at the hospital as an expert in data analysis, lean, project and change management. CG was never challenged about their ideas, findings or reports.

Figure 19 ACS financial Projects

Acure Coronary Syndrome Pathway
Financial Simulation Model - Projections

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Elective readmissions	15	15	15	15	15
Emergency readmissions	48	47	46	45	44
SGH ACS patients referred to CR	1002	1152	1325	1524	1753
SGH ACS patients completing CR	249	282	357	451	571
Non-SGH ACS patients completing CR	2	10	11	12	13
Income	£14,381,139.15	£15,152,775.48	£15,825,925.45	£16,536,885.59	£17,289,774.31
SGH CABG spells acute tariff income	£7,277,120.66	£7,582,943.47	£7,901,618.56	£8,233,686.06	£8,579,708.78
SGH Medical management spells acute tariff income	£948,817.94	£988,692.25	£1,030,242.29	£1,073,538.48	£1,118,654.20
SGH PCI spells acute tariff income	£6,155,200.56	£6,413,874.40	£6,683,419.07	£6,964,291.43	£7,256,967.52
CR completions post-acute tariff income	£0.00	£167,265.36	£210,645.52	£265,369.62	£334,443.81
CR apportioned acute tariff income	£287,622.78	£303,055.51	£316,518.51	£330,737.71	£345,795.49

Role Relationship/ Client

The theme was created to reflect the position of the consultant group in the St. Lydda's case study as more than just an interested party. The role in this case study was not a 'time-limited transactional relationship depicted in some organisations and previous research (Greiner and Metzger 9183, Schein 2002). This theme explores the relationship between St. Lydda's senior management, the relationship to service improvement team, the relationship to the clinicians, the relationship with external agencies and experts.

The management consultants were looked upon as experts in all things, clinically and methodologically. They drove decisions, they made changes to the organisation unilaterally. Employees saw their own voices disparaged over those of the management consultants. If it came from outside then it was the right thing to do, if it came from someone who worked the system for many years it was discounted. The consultant is a symbol of strength to some in the organisation and a symbol of oppression to others.

It was difficult for employees to develop a shared understanding and interpretation of new methods because there was no 'common grammar' to be able to agree a 'course of action'. Project members felt distanced by more senior members of staff when they used phrases like 'Lean will be used to strip away the inefficiencies in the system, we have to think in terms of 'whole systems' not just individuals. This had the effect of making nurses and clinicians (especially junior ones) to feel as though they were not needed or their decisions making was just a formality. Evidence based medicine was about filling in forms and recording only the information that was necessary to determine a course of action.

Following the functionalist literature, the power dynamic in this case study was one of the consultant as a powerful influencer. Werr and Styhre (2002) provides support for the notion that the consultant acts with the advantage of 'superior knowledge.' The Frame was for CG to provide the data analysis in order to decide which projects would be approved for piloting the Lean efficiency Programme. It is in the construction of the client-consultant dynamics (Alvesson, Karreman, Sturdy and Handley 2009) that we understand the influence that CG had over the direction of service improvement and the learning of new methods by the clinicians in the project teams.

The relationship between the physicians and the CG management consultants had an interesting power dynamic. The consultants were very much seen as experts, and validators in their roles.

Below is an excerpt from interview notes. The clinician is explaining about a rapid change project and how validated the people involved in the project felt, The validation comes from the consultants working on the RCP. This clinician is one of the new clinical champions of Lean.

> Interview notes with FM
>
> *FM:CG introduced us early on and the concepts of kaizen,*
> *ME: Early on?*
> *FM: Introduced at the steering group*
> *ME: and the concept that there would be training?*

FM: Historically, the Trust hasn't been very good at sustaining things. We do it right for a week and then don't continue. We get something new and then something else new and something else. We're not good at keeping things going.
So CG were introduced early on and explained the concepts, but I have to admit I didn't get it and found it immensely difficult to explain it to my colleagues. Then CG said you have to live it.
ME: How do you feel about the improvements (or not) with individuals? With processes?
FM: It's only until the training started that you could get a true insight. As we were teasing out how we would potentially like to work through the problem, they came and they were running their metric at what was measurable and what was not. They were doing their own independent review of the nursing staff and other communication lines and following patients through their journey. So they were doing a lot background research which may or may not have validated my opinion of what turned out to be. It was very useful, it was validating for people involved. A lot of interviews were key people of the group, it was validation for key members of the group

FM though that there were real effect from conducting the lean project. This was an example when the Lean project had helped to reduce waste and help employees to construct a better way of doings. FM had his doubts Cg and found it difficult to sell the idea to his colleagues and co-workers. Overall he felt the project had been a success. For me the crucial comment comes right at the end of the excerpt when he says it 'was a validation for KEY members of the group'. All of the positive things he was saying about the lean programme were only about the key personnel.

This new St. Lydda's clinical champion for service improvement was appointed. The clinical champion had no prior knowledge of Lean nor was he a cardiologist. His role was to encourage the adoption of Lean throughout the hospital into ward and surgical procedures. He had very little knowledge of the way things were supposed to work or how they were to be planned. Therefore he had to rely on CG to help manage the projects and the meetings. Shortly after the appointment of the new clinical lead , 3 new clinicians appeared on the attendee list or service improvement team meetings. One of these clinicians had instituted the ACS proforma at her previous employment (a fact not known at the time). No one from CG or senior management was in attendance. The issues and actions were not taken in 'agenda order but rather the minutes reflect a chronological discussion. Already the 'rules' of the meetings were being ignored or changed as it suited the individual players in the team. A shift in priorities begins to take shape. There are suggestions of changes to IT systems and software databases and an online method of identifying ACS patients was discussed.

The role of the Consulting Group was seen alternately as a threat and a saviour. They were viewed by senior management as a leading expert who could 'solve all our problems'. They were given great power and influence over the project teams. The consulting group was never questioned for their methods of reporting, the choice of data, their statistical methods, the data gathering and sampling. They were given carte blanche to undertake a paradigm changing methodology for the hospital. One that could potentially save money but also cost a great deal of time and money. There were no checks and balances as far as the Consulting group was concerned. If they said it, top management

believed it. Employees resented the Executives for making rash judgement about techniques that were in current use. They resented the managers who observed their work for half a day and suddenly knew exactly why they weren't getting cardiac patients into rehab. None of the nurse and ward staff trusted them. There was surfaced acceptance of their presence but not deep acceptance of their philosophy and methodology.

The Executive was hoping that I would find that Lean was the key to change in the hospital. Many other projects had tried and failed to make sustainable change within the organisation. He firmly believed that following consulting Group and the US method from Intermountain (a Lean project in the US) was the key to saving St. Lydda's. He used phrases and vocabulary from the presentations that had been given by CG and articles from Health Affairs on Lean in Healthcare (James and Savitz, 2011; Jimmerson, Weber & Sobek, 2005; Mozzocatto, Savage, Brommels, Aronson & Thor, 2010).

5.3 Barriers (1) Organisation

Organisations capture knowledge and information from their members in order to gain or hold onto their competitive advantage. Policies, process and structures are put in place to 'manage these assets' (Baily, Mankin, Kelliher and Garavan, 2011). Formalization and hierarchy are necessary for any organisation to maintain order and formalise learning. Expectations of behaviours are set out in formal procedures. However, this is not without its difficulties. High degrees of formalization may hinder innovation and reduce motivation and learning (Lawrence, et al, 2005; Cyert and March, 1963; Bartol and Srivastava, 2002).

This aggregate dimension focusses on the barriers to learning that arise from structural-organizational issues (Schilling & Kluge, 2009). Processes and systems put in place to manage experiences and information flow may also hinder the organisation's ability to retain the information (Glynn et al, 1992). The organisation's desire to create new mental models and share knowledge across teams and departments can fall foul of conflicting structures and programmes. Barriers also arise though politics and power structures (Crossan et al, 2009; Lawrence et al,2005). Knowledge management also pays a role in the stoppage of learning (Vera, Crossan and Apaydin, 2011).

The analysis focused on identifying and explicating how learning a new lean method occurred individually and across the teams and organisation. The idea of barriers to organisational learning is explored from the perspective of different team members: senior leaders, project management staff, clinical staff and admin staff. These differing perspectives gives a fuller picture of the experience of employees in their attempts to learn a new process within the dynamics of the organisation. Excerpts are taken from observations in meetings, interviews, and corporate material. Each piece of information gives a glimpse into the conflicts, struggles and mind-sets of the individuals involved in the learning.

This dimension represents the aspects of perceptions, actions, behaviours and organisational structure that were observed and described as undermining the flow of learning. Team members frequently mentioned aspects of manager behaviour and manager actions that were perceived to be obstructions to individual and group learning. This dimension describes phenomenon that indicate barriers that arose from managerial control of the flow of information and manipulation of organisational structure. Often the phenomenological data often contains examples that illustrate both managerial control and employee silence. This is used to show the differing perspectives that are contained within a single data point.

5.3.1. Managerial Control

This theme explores the project control system used to track information and keep up to date with project changes. In addition, the theme follows the establishment of communication with the project team is a fundamental part of OD and learning. In this case study, the Management control comes in the form of scheduling meetings and meeting membership, the discussion items tabled for the agenda. This theme is an illustration of events and timelines of invitations to meetings and informational flow controlled by managers. Managers had within their power to be able to give or withhold information. Managers controlled decisions about how lean was implemented. Their professional role as a medical care giver kept dissenters from openly questioning how the new methods were being implemented. There was a distinct tension between localised practice and the strategic goals of the organisation. Managers control the flow of information and learning in as much as they control the codifying of knowledge in a specific group (Schulz, 2001). The meetings and documents about a particular project combine new and old knowledge to exploit knowledge from the clinician's work.

Meeting membership

This theme specifically focuses on the attendees at meetings. This was important because people who attended project meetings had access to information where other clinical members did not. In addition, often other strategic information as discussed in improvement meetings making attendance to them beneficial to their members. If someone was interested in building their career at St. Lydda's it would be very useful to be able to attend the Lean project meetings.

Managers used these meetings as 'rewards' and punishments. If you were out of favour, you were no longer invited. If you were in favour, then you might get a 'boost' by having your name included on distribution lists. Managers used the meetings as part of control over the projects and over people.

An aspect of Management control is information flow through coordination of project groups. Part of this is about meeting membership. Management Control Systems (Kaplan, 2008) use communication and coordination as part of an overall organisational control. The flow of communication provides part of the feedback loop in learning.

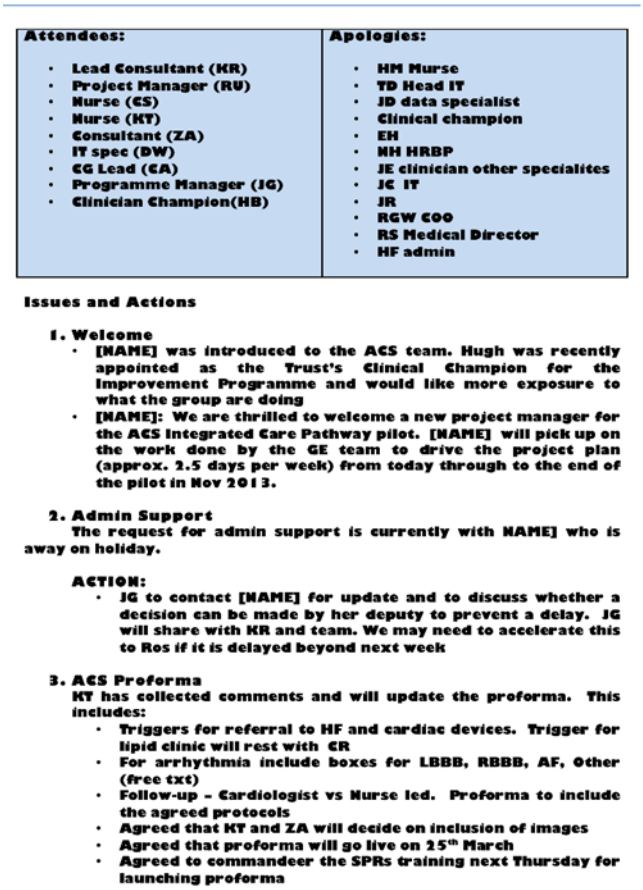
The idea of a coalition was introduced by Lowe (1972). Coalition in the context of this case study research takes the form of various service improvement and project meetings. Of particular interest to this theme is the make-up of the meetings attendee list. The control aspect is visible in the 'invitation' of who is allowed in these meetings and in what time frame. It supports the previous research on Information flow and information seeking in social networks (Borgatti and Cross2003).

Meetings are the new Integrated Care Pathway for Cardiac Care were comprised of both clinical and admin staff. At the start of the Project to introduce lean methods, the Consulting Group (CG) helped to draw up a list of attendees. The initial attendees included the CEO of the hospital, Chief Medical Officer, Chief Nurse, senior executives and senior clinicians. In public statements, senior hospital executives would extol on the importance of 'staying connected to pa project'. The review of the meeting minutes shows a steady decline the attendance of senior executives.

Figure 20 comprises 2 screen shots of meeting minutes from the project meetings. In reviewing the attendee lists in a timeline of beginning of project to end of project. The changes in membership are accompanied by change in goals. Statements about the goals of the projects are very different.

The membership of the various lean groups, working groups, committees, training sessions was severely restricted. An unseen selection process took place. In the beginning to the project, individuals at highest levels of the organisation were invited to meetings to plan the activities of the new patient pathway. The first 3 meetings were attended by senior management: Chief executive, Chief Nurse, COO, etc.

Figure 20 comparison of Attendee Lists on Minutes



Attendees:	Apologies:
• Lead Consultant (KR) • Project Manager (RU) • Nurse (CS) • Nurse (KT) • Consultant (ZA) • IT spec (DW) • CG Lead (CA) • Programme Manager (JG) • Clinician Champion(HB)	• HM Nurse • TD Head IT • JD data specialist • Clinical champion • EH • HH HRBP • JE clinician other specialites • JC IT • JR • RGW COO • RS Medical Director • HF admin

Issues and Actions

1. **Welcome**
   - **[NAME] was introduced to the ACS team. Hugh was recently appointed as the Trust's Clinical Champion for the Improvement Programme and would like more exposure to what the group are doing**
   - **[NAME]: We are thrilled to welcome a new project manager for the ACS Integrated Care Pathway pilot. [NAME] will pick up on the work done by the GE team to drive the project plan (approx. 2.5 days per week) from today through to the end of the pilot in Nov 2013.**

2. **Admin Support**
   The request for admin support is currently with NAME] who is away on holiday.

   ACTION:
   - **JG to contact [NAME] for update and to discuss whether a decision can be made by her deputy to prevent a delay. JG will share with KR and team. We may need to accelerate this to Ros if it is delayed beyond next week**

3. **ACS Proforma**
   KT has collected comments and will update the proforma. This includes:
   - **Triggers for referral to HF and cardiac devices. Trigger for lipid clinic will rest with CR**
   - **For arrhythmia include boxes for LBBB, RBBB, AF, Other (free txt)**
   - **Follow-up – Cardiologist vs Nurse led. Proforma to include the agreed protocols**
   - **Agreed that KT and ZA will decide on inclusion of images**
   - **Agreed that proforma will go live on 25th March**
   - **Agreed to commandeer the SPRs training next Thursday for launching proforma**

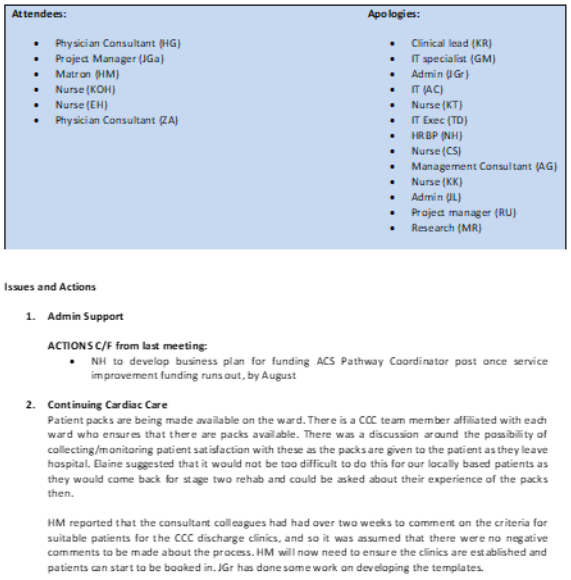
By the fourth meeting of the ACS team in February of 2013. The list of apologies was longer than the attendee list (see extract below). 'The right hand column' of apologies included the CG head clinical, the HR business partner, the Senio executives. The 'left hand column' the attendees had now become the chief clinician for cardiology, 2 members of the project management team, 2 nurses and an IT person. The clinical champion was being introduced to the group for the first time!. The project had been going for nearly 5 months and this was the first time he'd heard any detail.

Most of this meeting was spent trying to figure out the objectives for the project because the senior management objectives had been very different to this 'working group'. A lot of discussion of ground rules admin support changed four times over the course of 18 months. With gaps in between and others covering for this post.

In the beginning of the projects, the meetings were run by the CG and attended by Senior management e.g. Chief Executive, Chief Nurse, Chief Operating Officer. One of the early meetings took place in December 2012. This meeting was a discussion of strategic objectives. However, there isn't much recorded in the minutes. Subsequent interviews with the respective members of this group provided some insight into the meeting content. The Chief Nurse expressed the idea that CG was promising to help increases efficiency. Top level ideas and structures were discussed but plans were expected to be made by the project managers and clinical staff. The idea of clinical champion was proposed. There was agreement to attend the meetings every month and to follow the minutes and action points. In these subsequent meetings that clinical judgement is seen as the driver for decisions.

Figure 21 is also of meeting minutes but this one is used to illustrate just how many apologies there are for the meeting. The senior executives had started to drop off from the meetings. The remaining individuals were people either doing the work or local project manager and clinicians who were invested somehow in making the Lena Project work. By 'invested' , I am referring got their own career agenda in proving what they could do for the hospital. This the impression I had from the way the meetings were conducted and the action points given to individual in the meetings.

Figure 21 Apology lists in meeting minutes



Attendees:

- Physician Consultant (HG)
- Project Manager (JGa)
- Matron (HM)
- Nurse (KOH)
- Nurse (EH)
- Physician Consultant (ZA)

Apologies:

- Clinical lead (KR)
- IT specialist (GM)
- Admin (JGr)
- IT (AC)
- Nurse (KT)
- IT Exec (TD)
- HRBP (NH)
- Nurse (CS)
- Management Consultant (AG)
- Nurse (KK)
- Admin (JL)
- Project manager (RU)
- Research (MR)

Issues and Actions

1. **Admin Support**

   ACTIONS C/F from last meeting:
   - NH to develop business plan for funding ACS Pathway Coordinator post once service improvement funding runs out, by August

2. **Continuing Cardiac Care**

   Patient packs are being made available on the ward. There is a CCC team member affiliated with each ward who ensures that there are packs available. There was a discussion around the possibility of collecting/monitoring patient satisfaction with these as the packs are given to the patient as they leave hospital. Elaine suggested that it would not be too difficult to do this for our locally based patients as they would come back for stage two rehab and could be asked about their experience of the packs then.

   HM reported that the consultant colleagues had had over two weeks to comment on the criteria for suitable patients for the CCC discharge clinics, and so it was assumed that there were no negative comments to be made about the process. HM will now need to ensure the clinics are established and patients can start to be booked in. JGr has done some work on developing the templates.

There were more apologies than attendees so you can begin to see a disinterest beginning to creep into the Lena programmes. The action pints were still being dictated by the senior manages through the service improvement project managers. However, the senior managers no longer attended the meetings.

Talk of empowerment

This theme originated out of the comments from project members who felt their participation was being undermined whilst simultaneously hearing 'you should 'be empowered' to make decisions. There were many instance of management executives mentioning 'empowerment' in public talks and presentations, in team meetings and as part of project explanations.

Empowerment is generally used to describe 'a form of employee movement initiative" (Wilkinson, 1998, p 40). The focus of empowerment is often "task-based based involvement and attitudinal change" (Wilkinson, 1998, p 40). The work of Legge (1995) supported the discourse of empowerment "and this fitted the notion of an enterprise culture attitude with individuals seen as entrepreneurs" (Wilkinson, 1998, p42). St. Lydda's wanted employees to have this entrepreneurial attitude towards the new lean projects. They wanted employees to suggest new ways of doing things as they were learning lean.

Historically the *Quality Movement* including: TQM, lean, Six Sigma had a 'strong message of empowerment' Wilkinson et al, 1992; Durant, Kramer and Perry, Mesch and Parlberg, 2006; Spencer, 1994). Continuous improvement was seen as a 'bottom-up' approach where the worker's tacit knowledge was use to explore new methods and improvement to routines. The St. Lydda's corporate message was that clinicians had control over work process. It was the idea of 'sharing power' (Spencer, 1994). SHOs were being encouraged to hare decisions making and given power to make decisions but they were also expected to refer to Senior Staff.

Empowerment requires the elements of self-efficacy, sense of control over work environment and organisational practices that support delegation. There was tension between allowing for empowerment and having the underpinning organisational structure to support giving the SHOs that freedom to make decisions.

The Lead clinicians in SHO education on the ACS project spoke of encouraging psychological empowerment (Ref) but the perceived competence of SHOs undermined the ability of employees to make their own decisions or change the methods.

Autonomy and competence in professional practice is fundamental to nurses and physicians (Laschinger, Heather & Fida, 2015). Authentic leadership (Avolio and Gardener, 2005) is seen as part of the foundation that creates an environment of participation. Kanter's (2003) model of organisational empowerment is supported by managers who are authentic leader. In this case study, St. Lydda's managers seems to have a duplicitous approach to 'empowerment'. They verbally encourage empowerment whilst not organising the projects and feedback in a way that would allow SHOs or nurses to contribute through empowerment and participation.

Below are two sections of field notes that pertain to staff asking for clarification on using documents that pertain to Lean. In the training meeting for junior doctors, some simple questions revealed that they did not know how to use the forms. They were using the forms as scratch sheets when these were the forms that were supposed to transform the care in the Cardiac ward.

> *We want to empower you to ask but if not push it up (ZA talking to the juniors)*
>
> *The education training session with the SHOs and ZA explaining that they didn't know who their education supervisor was (PL) and they*

hadn't been taught how to use the pro formas. The SHOs expressed frustration that they had been given little or no direction from their Registrars. Many times the information they used in making a decision came from a Nurse Manager or Ward sister. In the meeting of August 2013, when the ICP Pro Forma sheets were reviewed, the SHOs confessed that they were unsure how to use them.

Field notes

This is about the summary findings of the review I did for St. Lydda's.

The SHOs were using the form not as it was originally intended but as a 'scratch' sheet. In the spaces for calculations to be made and recorded, narrative detail about the patient was recorded. The calculations for risk were often accompanied by other detail and not fully clear how calculation was determined. The SHOs knew that this form was necessary to determine risk for a MI patient, they'd listened to the overview of the forms, or the matron on ward. Although the SHOs could tell you what the form's purpose and bureaucratic chain, they still didn't use it for its stated purpose.

It was clear form meetings that there was a disconnect between what was said and planned in the project meeting sand what was actually being used in the departments and on the wards.

Absence of Feedback

This theme explores the phenomenon of the feedback loop that existed within St. Lydda's. Feedback in terms of team members talking to each other about the project and the feedback or lack of it from the Project leads. Learning doesn't proceed smoothly across the organisation and it is especially difficult when the feedback from learning is interrupted. The lack of internal process to give feedback to the ACS team created a stoppage in the learning. There was no way to bridge the gap between old institutional learning and the new learning (Berends & Lammers, 2010; Ron et al, 2006, Crossan and Berdrow, 2003).

In this case study, we are interested in the interruption between the individual and group, for example the disconnect between the nurses and their feedback to the SI team. Emotively, the clinicians felt left out of the detail of the project. Emotions influenced ability of cognitive function to make changes to new methods (Shipton & Sillince, 2013). Where previous studies have shown the feedback element was an important aspect to strategic change. This theme provides insight to the view that the absence of feedback stymies the transference of learning to new routines.

Feedback is an essential part of the learning and the employee experience. Analysing failure can help learning if there is an opportunity for safe reflective learning. Lack of feedback leads to resentment and assumptions on the part of employees. Not wanting to appear incorrect leads to suppression of challenge and creative ideas (Askew and Lodge, 2000; Davies and Nutley, 2000; Nystrom and Starbuck 2015).

I observed individuals would filling the vacuum of knowledge with their own ideas and agenda for change. Official ideas were domain of project managers, external management consultants and senior clinical staff. The absence of feedback focused the attention away from official channels and methods. Information they've gathered or information from peers is far more important. Buchanan (2005) similarly reported how individual interaction affected team learning in public health Although the team members were essentially creating communities of practice. This information that passed within the community was not necessarily accurate or helpful to learning and change.

These were cryptic field notes form a 'bollocking' meeting that we received form one of the senior managers in the lean programme. The Senior manager was frustrated that we were not making more progress on the project. After this meeting, some of the staff were excluded from meetings and I overheard some saying they were cut off from access to certain file folders. It was clear that the senior manager on the team wanted 'the right people and the right time', but those people had to be of his choosing.

> Field notes from
>
> *Then we had this meeting for setting the up database discussion*
>
> *Right ppl right time, right room*
>
> *The IT, the cardiac people,*
>
> *It was People who understood what they need was/is*
>
> *Actually knew specific areas that need to come out of the database*
>
> *Probably been in lots of meetings*
>
> *Talked about what was important to us*
>
> *Talked about how to get the info off the porformas*
>
> *Didn't bother with KR's (the senior clinician) stuff*
>
> *Too many fingers in same pie*
>
> *Confusion*
>
> *Meetings about the database stuff those we attended*
>
> *Meetings about the pathway, the official pathway*

I had to write these notes 'on the fly' because the meeting had been scheduled at short notice. It wasn't part of the regular systems of meetings. The progress of the software and the electronic Pro forma was very slow. It was at this point, that staff members really starting opening up to me about their feelings towards lean.

Application Discrepancy

This theme describes how the managers applied the principles of Lean to suit their own needs. The organisational structure of the Service Improvement enabled managers to use the Lean process to push their own changes and not necessarily the most efficient way of doing things.

Power and politics often have an overriding role in the delivery of new programmes in an organisation. Power can be used to effect a change or to suppress it (Lawrence et al xxx) .

There was a definite discrepancy in how lean was applied to the medical protocols and treatment of patients. From department to department, ward to ward, project to project, each manager had their own interpretation of how to affect change within their unit. The language of lean was used to justify actions that had previously been rejected. The lean method was used to blame bureaucracy for errors and to blame the system for not producing better medical care. This notion has been explored in some measure by Blackler and MacDonald (2000) in the emergent or established relations in and between groups. Socialisation and reutilisation ensure some control over what is embedded into institutional knowledge. Huzzard (2004) emphasises the struggle between learning in organisations through routines or through exploration. Power is articulated through social practices. The examples for this theme show a struggle between the power of the service Improvement Project Managers and the power of nursing and clinical community to establish medical routines. I saw that employees did not want to be associated with the lean programmes because they felt as though they were personal managerial pet projects a not part of the overall scheme of the organisation. (Blackman and Sadler-Smith, 2009; Westpahl, Gulah and Shortell, 1997))

These are field notes form a conversation with the matron of Cardiac Rehab. She was talking about how there was a mismatch between what had been originally intended for lean programmes and what was coming out of them. This particular project was supposed to be about getting more patients into rehab and it turned into something about forms

Field notes

> *HH told me today that when they first started it was supposed to be about the cardiac rehab….not everyone is engaged in that. If KR had wanted us to really change that he would have put in ACS nurses and Ward nurses into it (the ACS Project) EH*and C* worked nationally on rehab… they are very well versed on what's what…. …….Other medical consultants see it as a side project…… struggle to get any documentation for the rehab…….. it's all about the Lean stuff dictated by the SI team…*

Witness to manipulation

This theme explores the comments from employees about witnessing the difference in explanation from managers about projects and the reality of the daily work on the wards. Clinical project team members felt that the managers were 'manipulating' information about the success of projects or the progression of the work in order to present a successful picture of lean to the outside world. The team members saw the managers as 'telling stories' about lean and manipulating how lean was introduced for their own purposes.

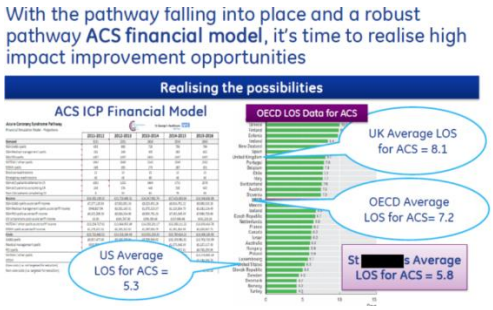
Stories have the power to convey organisational expectations (Young, Hesketh and Neal, 2006, Rasmussen, 2008)). Leadership stories develop the vision for the organisations. Stories help develop

rapport and trust within teams (Pettigrew, 1979). The stories that people perform in an organisation to make sense of change can themselves be powerful levers for change (Boje, 1991). War stories help to consolidate facts or beliefs into a sentiment of heroism and encourage belief in n organisational cultural phenomenon.

Project Managers and clinical Executives enjoyed a kind of celebrity that accompanied being part of the Lean project. Public presentations were made to the hospital as well as to outside organisation. The Consulting Group, a very well-known and well respected organisation, lent an air of credence to the whole lean project.

Figure 22 is about how CG calculated the 'wins' from the lean project. They presented the two slides below. Lean has had a positive effect in reducing the length of stay. In subsequent data analysis checking, I noticed that Cg had chosen their data points very carefully to tell a positive story.

Figure 22 Wins in Length of Stay



Statistical Tests using 4700 cases over the Fiscal Years 10/11; 11/12; 12/13 and current data for 13/14 revealed a post 'training' effect; shows a decrease in length of stay. Post training is defined as after Lean awareness, VSM, and pathway team meetings.

- Length of Stay shows a 2.7% decrease roughly equated to a 75 bed day reduction for ACS patients.
- 5 diagnosis codes account for 90% of patient admitted under ACS pathway
- A generic Arteriosclerosis heart disease code is the most common primary diagnosis
- 2010 was the 'best' year, i.e. fewest deaths, lowest length of stay (pre training)
- Even post training years, which are decreasing in length of stay, are not yet at the 2010 level.
- A definition of MI was changed (by NICE;NHS.org) in 2010 making it easier to specify an MI so it is puzzling as to why a generic code continues to account for greatest number of diagnosis

5.3.2. System Control

This theme attempts to describe an approach to implementing the quality system of Lean as a control mechanism. Control systems exist in al spheres of organisational work (Mullins, 2009). In fact, a 'main feature of organisational behaviour is power and control' (Mullins, 2009). Control processes help to circumvent idiosyncratic behaviours and adjust individual interpretation of organisational culture and procedure into a bureaucratic system of standardisation. Organisations require conformity in both their employees and their use of systems. Lean has the capability to streamline the repetitiveness of a job and produce more time for thinking and problem solving of complex issues (Mazzacato et al, 2012).

The shift from piecemeal work to a more systematic approach was used to convince clinicians that the new method of doing things was more appropriate to improving patient care. The lean system was meant to support patient care as a more efficient process. Clinicians beleaguered by checklists

and measurements felt Lean was a method of control rather than being useful or helpful tool. Clinicians interpreted Lean as a surveillance tool (Waring and Bishop, 2010)

The proformas weren't necessarily helpful in the care of patients. The clinicians were treating patients but they weren't filling out forms. The project manager and lead clinician responded by reinforcing the use of proforma rather than ask why it wasn't being used. The lean system was being used as a form of control.

The Clinical Project chair liked to use words like 'enforce' or 'check up on'. He didn't probe as to underlying reasons for non compliance or commitment to the project. He just stated his own interpretation of how the methods should be instituted and expected others to follow. None of the other staff members mentioned in this action points list was given an opportunity to discuss how changes could be achieved or what they have learned.

Figure 23 is a screen shot of minutes notes and how the nurses, SHOs and registrars were using them. Everyone was using them in a different way with notation all over the place. Kr the lead cardiologist wanted staff to use them so he could gather data for a research project. Because they weren't being filled in properly, he was getting angry. Not because, it didn't' comply with Lean but because his agenda was thwarted.

Figure 23 ACS Minutes

1. ACS Proforma

There is a gap in the numbers of proformas being distributed and the numbers being reported to the ACS Pathway inbox. There were also reports that some of the consultants (visiting and substantive) are resistant to completing the proformas. ZA reported addressing the issue with colleagues, but this needs to be reiterated by other consultant colleagues on the group.

KT reported that she had pulled ten sets of notes which should have held proformas. Of these, only 6 included proformas, and of these 6 none were completed in full. HG suspected that compliance varied depending on it being a weekday, weekend or bank holiday.

The group agreed that it was important to work towards achieving full compliance. Changes have been suggested to the proforma which will, again, slim it down and support compliance. The message should also be continued to be enforced that these will eventually move to being electronic documents and therefore they will have to be completed in order to proceed to printing the discharge summary.

The proforma should be modified to include 'day two ward round' and 'day three ward round' with a prompt at day two to remind the completer to check the results.
CS highlighted an issue with patients who go from ACS to surgery as coming off the ACS pathway. It was suggested that Nora, surgical pathway nurse, would be well placed to track these patients to ensure they remain on the ACS pathway. It was also suggested that the ACS discharge summary should be done with the surgical discharge summary.

Changing the Goal

This theme represents the observation that the project goals shifted during the course of the Lean Programme. Organisations initiate change for various reasons, innovation, establishing culture, streamlining the organisation, changing market strategy. In this case study, the change goal seemed clear to establish new routines with identification and rehabilitation of cardiac patients. A large part of this process was given over to the Service Improvement team and their Project Managers.

Project management is there to enable strategy to be embedded in a documented and disciplined form. It is purposefully designed to highlight the end goal (Achanga, Shehab and Roy, 2006). The

project management documentation itself leads to discussion of scope of projects, milestones, and desired outcomes (Womack and Jones, 1997). The interesting dilemma is this case study is that the goals shift and change. Over a progression of time, project members become more and more removed from the original goals.

The Pro forma had become a large part of this project. In fact, you could almost say that it was the project. The discharge summaries are a natural part of the pro forma which identifies patients as STEMI or NSTEMI coronary syndrome cases. An audit that had been completed in the Fall of 2013 suggested that the SHOs were not using the pro forma to its full advantage. The pro forma was mostly being used by the nurses and their part was structured in much the same way as the work that had previously done. Education and training session with the junior doctors (SHOs) and consultants only improved the performance of usage and accuracy of the documents for a very short period of time.

The new software add-on to St. Lydda's internal database was supposed to 'force' consultants to fill in the relevant pieces of information of the e-pro-forma that the chief cardiologist wanted to cover. The competing objectives of various group members made it difficult to follow the action points. It was even more difficult to prepare training session and presentations.

As goals began to shift, there was a distinct difference in what was being said about the end goals of the project. The actual style of the minutes and the actions took on a different position. Now we have issues and actions rather than agenda items. The language is of lists and tasks. Now we are getting other department involved in doing work. Forging ahead with three strands of work: discharge summaries, CCC discharge lead clinic and pro forma to identify the ACS patients. This of course made it very difficult for clinicians to understand what they were learning to do differently. Which goal were they working towards learning?

IT begins to feature as a component of the project. Lots of discussion about how to integrate the separate IT project into this whole ACS timeline.

There was a change in the emphasis of the project. At this point the meeting 'minutes' began to resemble a 'to do' list. The layout changed to a table format. Each agenda item was accompanied by an action point, an owner, a date due, the dependencies and the 'status' whether open or closed. It hard to say whether this arrangement influenced the discussion or the other way round. But the meetings started to have the flavour of a girls' scout meeting with the mothers reviewing who had to bake the cakes. It was no longer a strategic discussion but more of a working group to get things done. 'Standing items on the agenda were now named 'discussion points and featured at the bottom of the page. (see appendices for examples of changes in the structure of the meetings).

In mid-2014, the discussion about changes to the Acute Coronary care pathway focused more and more on the e-pathway. The group had not been successful in instituting a paper pro forma for ACS patients. The majority of consultants and SHOs did not fill out the forms. Physician consultants tried to keep form filling to an absolute minimum. Patient care was still achieved at the highest level but it was dependent on the individual doctor or nurse. Exactly the thing that lean was supposed to obviate.

Politics are a natural part of organisations (Senge, 1990) and can be expressed at organisational level as part of strategic renewal (Dutta and Crossan, 2005; Jones and MacPherson; Vince, 2001) as well as a personal attribute in the form of political skill (Ferris, Treadway and Perrewe, 2007). In these studies, we saw Managers taking control of information in order to change the outcomes of the project. Project Managers had a desire to create new Lean systems. Clinical Executives had a

number of reasons for orchestrating information: research aims and funding, creation of new facilities, heightening the profile of the project tor their own personal promotion. The meeting 'agendas' literally became the manager's agendas. Yet this was not unnoticed by staff members. Clinical staff could see that certain clinical executives 'just wanted to do the project for his own research'. Staff saw the agendas as being politically motivated and were not likely to fully change their behaviours.

Figure 24 is to show the differences in the meeting agendas. They are no longer agenda but simply action logs with names against different actions. Managers are now just demanding that 'their' things get done and there is no longer any feedback discussion about what is going on.

Figure 24 Action Logs: New Look to 'Minutes'

Ref	Action	Owner	Date Due	Dependencies	Comments	Status
2	HG/KR to circulate coding action plan to team	HG	11/1/13	TD writing plan	Waiting on Tom for clinical coding audit meeting minutes (email sent) and Leo Whittaker (PCT) for readmissions info (email sent).	Open
4	KT to continue to chase procurement for proforma ordering	KT	11/1/13	Agreeing outstanding changes to proforma		Open
5	NF to inform SHOs that all ACS patients are to have an echo as an inpatient	NF	10/17/13	None		Open
8	HM to ensure that the templates have been received by Maria Peries and are signed off ready for the clinics to launch once admin support is reinstated	HM	10/17/13	None	These have been emailed to Maria, awaiting confirmation.	Open
10	HM to contact Neha Shah re: getting CCC discharge summary on Merlin (given delays to ePathway)	HM	10/17/13	None	Emailed 27/10/13 and no response as yet - Helen to pursue	Open
14	PL to standardise the way PCI reporting is done and cascade to colleagues	PL	11/14/13	None	This will be captured in the redesigned proforma	Open
15	PL to monitor implementation of new way of PCI reporting	PL	12/1/13	Action 14		Open
16	NF to link in with AC to discuss awareness sessions of ePathway for SHOs	NF	11/1/13	None		Open
17	HG to look at use of intranet and internet for promoting ACS pathway	HG	12/1/13	Subject to IT agreeing update to internet	The content management system for webpages hasn't been updated yet according to Ian but should be soon.	Open
18	KT to pursue use of Patient Line to promote ACS Pathway/CCC info	KT	12/1/13	Dependant on PL contract being renewed		Open
23	HG to find out where the information on readmissions is calculated	HG/JG	11/30/13	None	HG pursued, with no response. JG to chase	Open
27	KT to send proforma amendments to HG	KT	11/14/13	Partially 14 & 15	This will be captured in the redesigned proforma	Open
28	HG to make amendments to the existing proforma to reflect agreed changes	HG	11/23/13	27		Open
29	KT to send amended proforma to procurement to get onto ward ordering system	KT	11/30/13	27 & 28		Open
30	JG to see whether all changes have now been incorporated into the discharge summary	JG	11/14/13	None	Contacted Neha (07/11/13) - is making changes currently.	Open
32	KR to follow up with Aurobindo to look at cardiac activity, based on coding and pathway.	KR	11/23/13	None		Open
33	KR to send coding information to PL	KR	11/14/13	None		Open
34	ALL to send training scenarios for ePathways to HG	ALL	12/31/13	None		Open

5.4 Barriers (2) Employee Expectations

This aggregate dimension describes barriers of learning from the employee or individual perspective. I have used the heading Employee expectations to represent the mismatch between what employee anticipated or hoped would happen in the lean programmes to the actual outcome of events. Employees were often disappointed by the way they were treated by managers. The theme and concepts under this heading collate the perception of employees as they experienced lean and learning.

5.4.1.Employee Silence

This theme was created to describe the how employees were 'holding back' information and their enthusiasm for engaging in the new routines. In meetings, clinical members would not voice all their concerns. In some instance, I was aware that they were even withholding feedback about how the routines were working.

There are two kinds of silence: not saying what they believe, saying it and someone not hearing it. Without the ability to feel safe to challenge ideas, Employees ideas and worries are silenced. Even if they have the courage to say something, more senior ranking employees ignore or disparage (Miliken, Morrison and Hivelin, 2013; Blackman & Sadler-Smith, 2009; Morrison and Miliken, 2003

Employees withdrew from the politically motivated process. Initial attempts were made to contribute to discussion about the project but were soon silenced. A conscious effort on the part of nurses, HCAs and Admin to withhold their opinions was evident (Blackman and Sadler-Smith, 2009). Tacit knowledge was certainly lost to this void in information sharing. Future projects would not be able to benefit from experiential learning because there was not mechanism for silenced employees to share their explicit or tacit knowledge of ways of working.

Below is an excerpt from field notes from a conversation with an admin person who was not happy about not 'being heard'. She had difficulty understanding her part in the project and felt powerless to change. This powerlessness lead to here adopting a surface 'do what's necessary' approach to learning the new system of recording patient data.

Field Notes

> *JGr left the organisation because she felt her complaints weren't heard. She attempted to make sense of incomplete data and was asked to make a conclusion without relevant information. She felt that she couldn't continue to do the job she was being asked to do.*
>
> *Employees actively refuse to acknowledge problems when they know or feel that something isn't right with the work. They consciously supress tacit knowledge of the job in order to comply with the new methods. The perspective of ward nurses on the meetings and the progress of the project gave response such as this:*

Knowledge Ownership

This theme describes how knowledge itself was used as a tool of domination. There was conflict between the organisation and the individual in the ownership of knowledge. This theme is concerned with the leverage of knowledge as a commodity in learning

Although Knowledge can reside with an individual; it is through the sharing of and externalisation with team members that it becomes part of the organisation's knowledge bank (Nonaka and Takeuchi 1995, Poyani, 1998). Managers play a pivotal role in the balance of power. Managing knowledge ultimately requires exerting control over the types of knowledge and how the knowledge is meted out amongst the members in the organisation. The power structure creates a conflict in the knowledge ownership (McCann and Buckner, 2004, Tseng and Fan, 2001). The struggle over who owns the knowledge and who owns the right to access information to create knowledge, creates barriers to knowledge processes (McCann and Buckner, 2004; Rechberg and Syed, 2013).

A natural conclusion would be to assume that the power resides only with the Manager. A Foucauldian (Foucault 1977) reading of the situation would lead us to believe that managers hold personal power that allowed them to choose how and what knowledge is shared (Van Dijke and Poppe, 2006). However, in this theme, the idea that employees hold power by withholding ideas and interpretations of data and new learning. They use silence (Blackman and Sadler-Smith 2009)as

a way of protecting their experiential knowledge. The silence was a method to exert some autonomy in not being controlled by the managers (Blackman and Sadler-Smith 2009; Van Dijke and Poppe, 2006).

I observed employees withholding their opinions in meeting sand withholding their natural experiential learning from the daily work on the wards. Silence was a way of gaining control over the situation. It was as Blackman had suggested a 'consciously withheld voice' that prevents knowledge from being shared. At the same time, Manager were restricting access to people with knowledge and basic data facts of knowledge. Some clinical staff were not invited to meetings or given access to computer drives that held information on the Lean projects.

Employees stayed silent about problems. They withdrew from the situation using defensive mechanisms (Argyris and Schon, 1978). .

Field notes from a conversation with a member of staff who was so upset about not having feedback during her part in the lean programme that she quit. She felt she had been given an impossible task with no one to help her.

Field Notes

> *"They've asked me to do this. Enter the data but here isn't any….no one will listen to me. I'm fed up. I've started looking for something else. I didn't start on this project from the beginning. I don't know what's going on. I don't tell them, I just stay quiet, I'm only telling you because you're outside all this. I just keep my head down and don't go to the meetings and don't say anything (Interview notes with JrG April 2013)*
>
> *Shortly before she left St. Lydda's I caught up with JrG*
>
> *"I can't stay here with all this going on. I'm invisible most of the time. They want something impossible. They want to me record something that isn't there. There's too much to do, too much to learn. All these crazy new procedures." (Interview Notes with JrG)*

When problems surfaced, staff were discouraged from discussing them. The project manager made excuses at every ACS team meeting for why admin help wasn't forthcoming, why the IT team couldn't make the changes, the HRBP didn't attend half the meetings and wouldn't answer emails, the service manager didn't give the project top priority. No permanent resolutions were given.

In the meetings, the recorded notes had discussion altered. E.g. questions about the resources for CCC were tabled. KR asked HcM to speak to him 'offline' and those conversations hardly ever seem to happen. Information about what they were 'really' studying was discussed in hallways, closed offices, during coffee between ward nurses and SHOs but not brought up in the meetings.

The Clinical Lead and Lead Registrar were enthusiastic about changes they were making. It wasn't as if the meetings were entirely unpleasant they just didn't focus on the content of the original project. The clinical lead had taken over the ACS theme for his own research benefit. Dissenters were discouraged from asking questions, information about IT changes were discussed between the senior project members (KR, HG, GMcS and JJ) without consent or knowledge from the others. At a subsequent meeting, AC, one of the IT specialists, would tell us that a change had been made.If I pressed the matter, The clinical lead, KR, would acknowledge that information was suppressed but 'for good reason', in order to facilitate the flow of work.

Micro feedback

This theme depicts the mini feedback loops that existed within the teams without using the knowledge from lean or the Project Managers. It was a little microcosm of activity for learning.

Feedback loops as conceived by Argyris (1980) in double loop learning describe the process of learning, adjusting and recalibrating knowledge based on feedback from previous experiences. Crossan's (1999) conceptual framework describes a process of feedback between individuals and the group how they share their learning for new knowledge to be embedded into organisational routines. In this case study, I examined corporate documents for evidence of the feedback between service project members and the clinical team members. In addition, this theme contains data from field notes derived from conversation with clinical team members about the progress of learning and the feedback from managers.

Double loop learning (Argyris, 2000) supports changes to our mental models of the world. In order for learning to progress, linkages between the loops must be made both for our own individual mental models but also if we are to embed the learning into an organisation. Unfortunately, Individuals in organisations often see their own learning in an isolated way, disconnected from their team or department.

Of course, all learning is essentially a feedback process. Information is collected and used to revise decisions and form mental models for future use. However, the information gathering and interpretation are influenced by social practices. Misperceptions of feedback and selective omission of feedback are detrimental to the discovery and interpretation of information necessary to embed learning (Sherman 1984, Bandura xxxx). The most basic feedback loop compares what we know about the state of the world to our current set of experiences (Schon, 1992; Womack and Jones, xxxx). As we use our experiential learning, we understand that there are other influences to the feedback loop and it is more complex. In this case study, clinicians couldn't fully use the reflections from experiential learning because the feedback loops were interrupted and didn't flow back to the Service Improvement team. There were micro feedback between clinicians that developed 'outside' normal work information session but these were mostly about patients care; and how to avoid filling in forms.

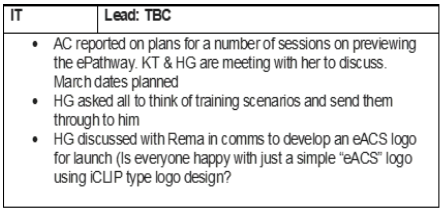
The streamlining of processes into specific protocols in modern healthcare contributes to this sense of isolation (Nutley and Davies, 2000). Senge's open systems thinking counters this isolation by teaching the merits of reintegrating activities and connect into communities of practice (Senge, 1990; Brown and Duguid, 1991). The medical field was fond of using learning cycles to reflect and review patient outcome. The (PDSA)Plan – Do- Study-Act cycles that were promoted as part of the medical Lean transformation have their basis in double-loop learning.

Learning from good will meetings is essential but considered outside normal work day. Many of the project members described as "Got involved by chance" in the project itself. Many felt that they had a moral imperative to help make the hospital more efficient. They could all name instances where a patient hadn't been identified as a cardiac patient when being admitted to hospital and while they couldn't prove that the care was worse or better, they felt anecdotally it would have been better to have these patient all together. They'd all had the experience of trudging through the hospital from ward to ward on a patient treasure hunt for their cardiac charges. This was time consuming, baffling, confusing and sometimes heart wrenching when they would get to the bedside of patient whose liver had failed. So this drove many of the clinicians to want to change the way patients were

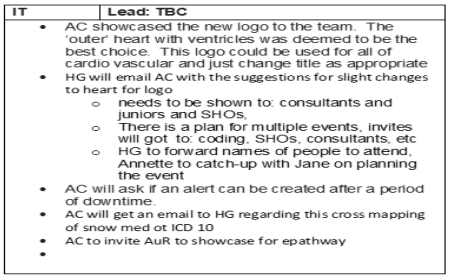
recorded into the system when they first arrived. They didn't want to play the game of hide and seek once the patient had been seen in A&E.

Figure 25 is a screen grab from the minutes on the discussion of the electronic ACs pro-forma. Even though, SHOs and Registrars were not using the paper form properly, the senior manager wanted to go ahead an commission the electronic form. He was hoping to 'encourage' people to use the electronic form. In other words staff would have no choice but to useit.

Figure 25 Screen shot comments on electronic ACS



IT	Lead: TBC
• AC reported on plans for a number of sessions on previewing the ePathway. KT & HG are meeting with her to discuss. March dates planned • HG asked all to think of training scenarios and send them through to him • HG discussed with Rema in comms to develop an eACS logo for launch (Is everyone happy with just a simple "eACS" logo using iCLIP type logo design?	



IT	Lead: TBC
• AC showcased the new logo to the team. The 'outer' heart with ventricles was deemed to be the best choice. This logo could be used for all of cardio vascular and just change title as appropriate • HG will email AC with the suggestions for slight changes to heart for logo o needs to be shown to: consultants and juniors and SHOs, o There is a plan for multiple events, invites will got to: coding, SHOs, consultants, etc o HG to forward names of people to attend, Annette to catch-up with Jane on planning the event • AC will ask if an alert can be created after a period of downtime. • AC will get an email to HG regarding this cross mapping of snow med ot ICD 10 • AC to invite AuR to showcase for epathway •	

These two excerpts display the outcome of conversations held within the smaller IT group of the ACS Lean project group. This was a mini feedback loop of individuals who shared knowledge between them about the logo that was to be associated with the ACs programme and the pro forma for the GRAC scores. These forms were for use in identifying patients as part of the cardiac programme.

Politics of information flow

This theme covers the experiences of the team members and their descriptions of being able to access information, what information came to them from executives, service improvement project managers, and management consultants. It describes the flow, of lack of flow of information. It is important to the context of the case study because information acquisition (Huber, 1991) is fundamental to learning.

Collaborative ventures between departments or projects that generate knowledge sharing add value to an organization (Hardy et al, 2003). The effect of the collaboration should combine resources, ideas and transfer knowledge. Transferring such knowledge can also be politically charged.

Politics in organisations affect the movement of information and ideas (Lawrence et al, xxx, p182). "Organisations are political arenas in which multiple actors may be engaged in influence contests

aimed at acceptance of their own ideas" (Lawrence et al, p 185). Assimilating new knowledge is affected by access to information and resources. "Champions of ideas being interpreted need access to necessary resources" (Lawrence et al, p185). Resources include expertise form other organisation members, Informal networks, electronic databases and organisation equipment. In the case study organisation, the resource most restricted to the clinical staff on the ACS project were the informal networks and access to expertise. Information seeking is an active part of information flow (Zeitsma et al, 2002). In this study, information was important for handovers in ward rounds, new procedures for capturing information about patients and new criteria for identifying types of patients. For this to happen, there needed to be a shared norms and trust for your colleague's information. On an individual level, a person needs input from the group or organisation.

In the field note, an example is given of how the staff members were not given information until after a new protocol had been instituted. Developing their own insights into a 'new way of doings' was hampered by their lack of information and lack of ownership. The mechanical aspects of their jobs remain stable but the organisation was asking them to do use new routines to record their actions and decisions.

Field Notes

> *Staff member described not 'owning' the information about Lean or the new protocols they were 'aware' that 'some kind of lean programme' was going on but not part of it. They saw the posters but didn't feature into their everyday working patterns. Kaizen weeks were run but most staff had little involvement with it. It was a select group. Staff were just 'trying to keep our heads down' and not get 'mixed up with that'. .*

The membership of the various lean groups, working groups, committees, training sessions was severely restricted. An unseen selection process took place. In the beginning to the project, individuals at highest levels of the organisation were invited to meetings to plan the activities of the new patient pathway. The first 3 meetings were attended by senior management: Chief executive, Chief Nurse, COO, etc. After those initial meetings, the standard list of attendees changes and access to shared drives on the hospitals network changed as well.

Access to information

This theme is more specific than the politics of Information flow and specifically concerns the permission to access information. This idea of Permission extends to conversations, data drives and meeting minutes.

Cyert & March (1963) observe that searches for information tend to be focussed on the vicinity of problems, symptoms or the current alternative. This idea has significance to understanding this theme in our case study. Clincians were searching for information to resolve issues of patient care but also how to reconcile the new Lean methods with the current ways of working.

There was an uneven and unpredictable distribution of knowledge about projects and new ways of working. Cyert and March (1963) assumed that the search for knowledge and information tended to be focussed on problem solutions and remedies from past problems or current alternative options that are readily available. The choice of information is greatly affected but the 'source availability'.

The availability of information is fundamental to the ability for individual to engage in learning and create a knowledge store for the organisation's routines (Grant, 1996). Organisation members must determine the level of their colleagues expertise and readiness to share information to make a decision as to whether they seek information from them in future (Borgatti & Cross, 2003).

"Knowing that someone else has valuable information is important but their expertise is really only helpful is they are accessible" (Borgatti and Cross, 1995, p 435). Timeliness is also an issue. For information to be of benefit it needs to be timely in order to help the individual learn to make new decisions. We rarely make informed decisions but rather satisfice (March and Simon 1995). Borgatti and Cross (1995) noted that as solutions become harder to find, the incidence of search reduces, in other words, people give up the search for new information when the access is difficult. Barriers can come in the form of technology or in the form of influence.

Influence and force did not encourage individuals. Instead they hoarded information and built barriers to sharing across levels to project leaders and to colleague (Haldin-Herrgard 2000; Holstein and Field 2010). Learning and Information did not pass from Individual to group shared understanding. Status, power, and political struggle leads to uneven access to information. Although, rapid improvement events had workgroups comprising of employees at different levels in the organisation, information was not freely shared amongst them. These members did not always have the same access to resources. Meeting minutes and meeting membership show a clear demarcation between the 'haves and have-nots' in terms of access to information and decision makers. (Mura, Lettieri, Radaelli, & Spiller 2013; Waring, Curie, Compton and Bishop,2013). Information ownership and how knowledge is passed from one group to another was dependent on the willingness to share of more senior clinicians and management consultants. The information was held in the project leadership to the nurses or doctors who saw patients.

The logical point of information flow for new members would have been Induction, but this was haphazard. The induction were meant to cover, among other things, the type of information needed for the ACS project and the best way to capture it in order to be able to assign cardiac patients to the most appropriate ward once their emergency procedures had been completed. However, SHOs rarely had a chance to exchange information freely amongst themselves. Their senior registrar or consultant would pass down the information and style of working to SHOs. This meant each SHO had a different way of interpreting pro formas and the goals of the ACS project. Throughout the study there was evidence that the information stated at different levels and was used by more senior managers to control less senior clinical and admin staff.

Below is the example where the SHOs explain in a training session that they don't where to get their information from and who to ask about using the new Pro forma

Field Notes

> *The SHOS told us that "My reg tell me to…. And the senior nurse told me to…" the SHOs were being trained by nurses on the ward and the emergency room. Because of the working time directive, the SHOs have very little contact with each other. They just do what the sister in charge tells them to do or their shift registrar. Very little learning of new methods is taking place.*

Meetings were outside work hours so it made it difficult ot compare information and the information take on a superfluous, unneeded quality like it wasn't part of the mainstream of knowledge.

Supression of Challenge

This theme describes the ways in which more senior managers suppressed question from clinical staff about the evolution of the Lean projects. An essential part of learning is asking questions. The experience for many of the clinical members of the lean projects was an absence of freedom to ask questions. Without the ability to have a dialogue of two way communication, the learning from the lean projects suffered. It is difficult to change anything when one does not know the basic information about the change itself.

Psychological safety to able to ask questions is one component of change and learning (Tucker and Edmonson,200). Without asking questions and open communications the organisation is in danger of supressing natural curiosity. Even worse, Organisational silence (Morrison and Miliken, 2000) can create destructive cycles of behaviour. This kind of passive behaviour can lead to inaction and defensiveness (Argyris and Schon, 1978). It also creates a cognitive dissonance between what employees are willing to say publicly and what they believe privately or with close colleagues. Organisaitonal silence (Morrison and Miliken, 2000; Blackman and Sadler-Smith) restricts the dynamic feedback between team members needed to present for organisational learning to take place. If employees refuse to ask question again new knowledge (Huber 1991), then no knowledge sharing (Nonaka, 2003) can take place.

The whole project shifted to be about documentation not the work itself (KK) as one of the participant in the lean programme moaned. Below is an excerpt from my field notes diary after a coffee break with JGr. She was the second admin support for the project

In addition, nurse and clinicians felt 'silenced' and over shadowed by the slick presentations given by the CG. While the senior management was propagating and extoling the successes and ideas of the CG, the rest of the project team was struggling to have a voice in the feedback and to understand how this new system would fit with patient care.

The process of interpreting the information about the lean projects needed to happen on an individual level but needed input from the group or organisation. In the example below from the meeting minutes except, the staff members were not given information until after a new protocol had been instituted. Developing their own insights into a 'new way of doings' was hampered by their lack of information and lack of ownership. The mechanical aspects of their jobs remain stable but the organisation was asking them to use new routines to record their actions and decisions. The 'pro-formas' were an invention of one of the managers but these were not introduced to the organisation in ways that encouraged intuition amongst the staff

Below the document describes how the group continues to have trouble in getting people to even receive pro forma or fill it out.

Below is a corporate document from a project meeting.

1. *ACS Proforma*

   There is a gap in the numbers of proformas being distributed and the numbers being reported to the ACSPathway inbox. There were also

reports that some of the consultants (visiting and substantive) are resistant to completing the proformas. ZA reported addressing the issue with colleagues, but this needs to be reiterated by other consultant colleagues on the group.

KT reported that she had pulled ten sets of notes which should have held proformas. Of these, only 6 included proformas, and of these 6 none were completed in full. HG suspected that compliance varied depending on it being a weekday, weekend or bank holiday.

The group agreed that it was important to work towards achieving full compliance. Changes have been suggested to the proforma which will, again, slim it down and support compliance. The message should also be continued to be enforced that these will eventually move to being electronic documents and therefore they will have to be completed in order to proceed to printing the discharge summary.

The proforma should be modified to include 'day two ward round' and 'day three ward round' with a prompt at day two to remind the completer to check the results. CS highlighted an issue with patients who go from ACS to surgery as coming off the ACS pathway. It was suggested that Nora, surgical pathway nurse, would be well placed to track these patients to ensure they remain on the ACS pathway. It was also suggested that the ACS discharge summary should be done with the surgical discharge summary.

The Clinical Project chair liked to use words like 'enforce' or 'check up on'. He didn't probe as to underlying reasons for non-compliance or commitment to the project. He just stated his own interpretation of how the methods should be instituted and expected others to follow. None of the other staff members mentioned in this action points list was given an opportunity to discuss how changes could be achieved or what they have learned.

5.4.2. Ennui: Malady of Malaise

This next section describe the themes that support this 2nf order theme of ennui. Staff member were getting very tired of change. As the previous sections have shown, lean was beginning to take on negative connotations. People interest was waning in the prospects of success. Clinicians no longer felt that it was helping with their patient outcomes.

Waning Interest

This theme has roots in both psychological commitment theories and in the learning theories. Huber (1991) expressed the idea of Information overload, whereby units in an organisation could not cope with all the information given to them. It resulted in a kind of paralysis. The evidence form the case study organisation was that the Lean programme was difficult to follow because of the pressure to adhere to complicated instructions I now to perform old tasks in a new way. The desire to continue using the established methods of working may also been part of escalation of commitment strategy (Vermeulen and Sivanathan, 2017). People may reinforce decisions in order to keep the status quo. In a similar vein to the explanations of defensiveness that Argyris and Schon (1978) discuss as part of decision making and learning. There may also be an element of fear to loss aversion that employees

do not want to lose what they already know how to do. Additionally, there may also be an element of fear of change (Kotter and Schlesinger, 2008). A classic resistance to change is to involve individuals in the change itself. However, in this case study, I observed a lack of interest in change and a lack of interest in participation.

I witnessed a waning interest for lack of belief in the new methods. Change fatigue set in after initial changes are made. When suggestions from staff are not acted on they feel as though they are part of the process. They are just there to carry out orders and not think. If they see a discrepancy in what is being claimed has changed and improved and what they believe has changed and improved, they will stop trying to help with the change. Often senior managers talked about how many benefits were being realised but the photograph below shows a clear pattern of waning interest. The first few months had a flurry of activity and then it drops off.

Figure 25 is a picture of the improvement board showing a drop off in projects. Only the first four columns are filled in and this about a year into the tranformations. Fewer things were being recorded and fewer things were beig done.

Figure 25 Improvement Board

Change fatigue

This theme further explores the difficulty that St. Lydda's had in changing mind-sets about the Lean methods. Many managers underestimate the variety of ways that people will invent to resist a change (Kotter and Shlesinger, 2008). Initiative Fatigue is one of the prime causes of failure of a change (Bamford and Forrester, 2003)

Managers themselves often resist participation in their own employees. This has been seen in earlier themes describing restricting access to information and the political obstacles to the flow of information in the workplace.

The 'best practice' in change programmes is that the change will be monitored by a senior executive or a project manager. There would be a feedback mechanism for employees to air concerns and

grievances (Buchanan et al, 2005). But no one is monitoring the change then how can employees gain accurate experiential learning form it? When do they know that they change has occurred? (Nonaka and Takeuchi, 1995). In addition, Change can sometimes focus people on their own self interest and create conditions for burnout (Buchanan et al, 2005). Employees engaged in self-preservation mechanisms of closing ranks and doing just enough with the new forms to satifsy the lean project managers. The change itself is often viewed as a valuable learning tool but only for those who can exploit the change experience (Buchanan et al 2008).

The experience of staff at St. Lydda's was one of isolation from the information. Different levels of the organisation had information at different times. The select group of 'lean experts' designed new forms and patient pathways with very little input from anyone else.

Below is a brief excerpt from an interview notes with one of the clinical leads. He tells of the committee informing him that there would be a change. He was striving to be enthusiastic but he couldn't hide the sarcasm from his explanation. Other previous change attempts in the hospital were viewed cynically and this latest Lean method project was seen in a similar light.

Interview Notes

> *ME: how would describe how were first introduced to the idea of new pathway or RCP?*
>
> *FM: Steering group committee which informed me that we were going to have a rapid change/lean/improvement programme. The usual plethora of titles but that we would focus on paediatrics……Originally the focus was on the day ward, admitting*
>
> *Me: What did you think that mean*
>
> *FM: Weeeeelll truthfully, having had 3 previous attempts at change, we didn't have a lot of time for it…. ….Previous improvement programmes, which in my opinion, had been farcical, directionless, didn't really change anything for anyone, de-motivational, my enthusiasm was immense (said sarcastically)……..but we haven't got that engagement to go back to them again and again…….They need a radical re-haul…..In a ward that wasn't as in flux that didn't have the issues, the changes aren't as obvious…..there so much else going on, the changes needs to be seen as a priority (shrugs)……Head consultant goes to ward everyday, give news of the day……..but we are not getting to all the staff*

Staff interest in the Lean initiatives varied greatly. As the clinical lead explained in the interview, many other projects had been attempted but never completed fully. The well known consulting group spear heading this particular change programme with Lean was sanctioned at the highest levels of the organisation. Therefore, clinical leaders, at the outset, showed a modicum of interest. However, even this level of interest could not be maintained.

There seems to be a message that not all staff are engaged in the learning and it's difficult to institutionalise the best practice.

Disinterest in a dishonest programme

This theme describes the lack of trust on the part of clinical team members. Trust is a vital part of learning (tucker and Edmondson, 2003; Edmondson & Moignenen, 1999). Collaboration in teams is essential for knowledge sharing to take place; one of the fundamental building blocks of learning. This themes describes the scepticism surrounding the Lean programme. Clinical members didn't feel able to ask questions, or promote their own ideas as mentioned in earlier themes. The disinterest in lean manifested itself as: distrust, conflict, silence, and withdrawal from group interpretation.

Levin and Cross (2004) described the term 'receipt of useful knowledge' as having a positive impact on a knowledge seekers in their daily work. Without useful knowledge the teams cannot advance their practice of medicine, and without trust, knowledge isn't likely to be shared.

Lewecki's et al (1995) conceptualization of distrust helps us to understand the disinterest in the new Lean programme efforts at St. Lydda's. Trust in management declined because of perceived injustices or failures to maintain integrity in organisational structures (Lewick et al 1995, Morgan and Zeffane 2003)

Conflict in organisations is often studied with a focus on static transactional exchanges but the management of conflict is often set in complex multi-faceted relationships as was the example in our case study organisation. Beyond personal trust is the concept of Institutional trust in organised systems (Zucker 1986). Employees must generalise their personal trust to large organisation made up of individual with whom they have low familiarity, low interdependence, and low continuity of interaction (Lewicki et al 1995).

Trust can be further breached when a change is introduced into the organisation. "the trust and safety needed to engage open participation in a learning process is hard to build but easy to destroy" (Carroll & Edmondson, 2002, p.55).The teams need to have a 'psychological safety' in order to be able to learn. Psychological safety is central to learning behaviour. Without safety or trust, very little learning will take place and much less will be embedded into the organisation's routines. Trust 'enables the willing contribution of oneself – one's ideas and actions- to collective work.' (Edmondson, 2003). A learning 'anxiety' can occur when expectations are not met and prevents productive learning behaviour (Edmondson, 2003)'Feedback-seeking' was a behaviour identified by Edmondson (2003) as essential for successful task completion and embedding of routines. When people are under threat, they revert to defensive routines (Argyris, 1990) and sabotage their own organisation's learning. Relational and structural characteristics of social capital are essential for the receipt of tacit knowledge. (Levin and Cross 2004).

The field notes below illustrate Some clinicians and project staff expressed dissatisfaction with the Lean programme. They felt the achievements were overstated and that routine patient care was not recognised as it should be.

Field Notes

> *"It's a side project, we are still giving good care (KR) Of course patient safety was paramount but we could have gone about it in a different way and where I sit we were already doing the medical bit" Interview with Nurse KK*

5.4.3 Patience Tested

This second order theme is about how staff felt that their contribution was being put to the limit. They're expected to use their good will to come in for meetings before their work day began. As a group, they felt that their voice was not heard. It was difficult for team members to exchange information because the meeting were being held at inconvenient times to fit into daily work. Lean began to feel like an extra thing to do.

Voice of Groups

This theme was created to explore the barriers to learning from the silos that were created by limited sharing of opinions and knowledge. Clinical members of the rapid change projects found themselves isolated form the main stream knowledge of the service improvement groups. In previous themes, we have explored the lack of information flow and the political nature of inclusion in meeting sand privileges to access. This is theme is about the 'voice' of each group not being heard. The perception from employees, both clinical and administrative that their 'group' was not listened to for their feedback and experiential learning.

Employees often complain about not getting information from other groups or project teams. Information about new lean projects is passed to them after implementation. Out of date information frustrates the teams and they waste time trying to obtain new data. The clinical teams then focus inward on the daily work of the wards and create stories amongst themselves.

Isolation in and inward focus in the teams tends to create silos making interaction between team members and other teams very difficult (Senge, 1990; Vakola and Bourdas, 2005). With continued silo behaviour leads to silence as defined by Pinder and Harlos (2001). The focus is on silence as an act of withholding one's true expression about the organisation. In this case study, this idea of silence spread from individuals to their defined groups, i.e. ward nurses, project team members, cardiology technicians.

'Speaking up' is a term used in the healthcare profession to define a behaviour about concern for patient safety. There is a professional expectation to raise concerns about risks and mistakes. (Okuyama, Wagner & Bijnen, 2014). While 'speaking up' is thought of as an individual act. Is the start of sharing concerns with co-workers and team members. This often leads to group discussion and to dissent.

In a time of change, there is more pressure for expressing concerns. Information about the new system can easily be lost. Trouble shooting the initial problems of a new system may become impossible because not enough feedback from raised concerns I available to provide a complete learning loop.

The perspective of ward nurses was that the voice of different groups was not heard. Employees actively refuse to acknowledge problems when they know or feel that something isn't right with the work. They consciously supress tacit knowledge of the job in order to comply with the new methods. The perspective of ward nurses on the meetings and the progress of the project gave response such as this:

Interview Notes

> *"KR wanted to use the data for his own research. We knew how to do our jobs or (huffs) so we though…. we know some of our patients are not getting into cardiac rehab but the vast majority are. We do the*

discharge plans but if the consultants and registrars don't support us, we can't change the process. There's a mismatch between what we do and what KR says we do. But who is going to say that OUT loud? Not me? " (Notes from Interview with CNZ June 2013)

This comment was made just after an ACS team meeting in which CNZ had hardly spoken. She'd answered a few direct questions but hadn't given her true assessment of the situation. Staff didn't feel able to give their feedback to more senior executives, project managers or clinicians. The true picture of the work and its processes was not being shared amongst the group and certainly not with senior staff.

Another nurse commented on the struggle to keep the project on track for its original intention of getting patients in to cardiac rehab:

"Now they are talking about cutting back on the cardiac rehab. The gym will be divided in two and they are making room for more offices (shakes her head in disbelief) the whole point of the project was get more people in to rehab but now they are cutting back. It's just goes to show you that they aren't committed to this. They want to show that they've done something not actually do something. Well I'll just shut up and do my job and not say anything because that's how we get along. I'll learn my new GC methods and smile just like everyone else. (shrugs her shoulders)" notes from meeting with CS)

"How are we supposed to send a patient down from the ward to rehab when there will be less available space? Who can talk about this? Who can ask this questions? There's nobody. I can't say anything because the person who should be helping me is the one who is making changes. So we just do our work he best we can and keep ourselves to ourselves" (Notes from meeting with KKO)

In these examples, employees express a sense of being silenced by circumstance of the project. They haven't been able to share feedback or interpret learning in the projects. The learning of lean is just a done to satisfy the project not to change behaviour or to make a new cognitive connection.

Goodwill over stretched

This theme describes the how employees felt their willingness to do extra work was exploited. There exists a great deal of 'goodwill' in the NHS. Clinical team members generally stay late or come in early to ensure that all necessary work is achieved. However during the Lean programme, the level of commitment being asked of the team members rose significantly. The additional burden of Lean created ill will amongst the clinical team members. This resentment had an impact on learning

because is was the lean programme was connected to the new ways of doing things and employees simply did not have enough energy to explore a new way of working for themselves.

Limited resources in the NHS has results in clinical staff having to do more in of their good will or OCB. It has benefited the management of the organisation in terms of the workload accomplished through sheer extra effort. Organisations often depend on extra ordinary effort on the part of employees. OCB proposes the gestures of goodwill' are exchanged between employees and the organisation (Mohammed, Habib and Alvas, 2001).

Hopkins (2002) concept of reciprocity helps explain the expectation of employees. OCB has been linked to motivation and learning (Somech, Drach-Zahaay, 2004). Organisations rely on individual who encourage change regardless on their position within the organisation. Behaviour that exceeds the job requirements are crucial to organisational change programme's success... (Brief and Motowildo, 1986; Katz and Kahn, 1966).

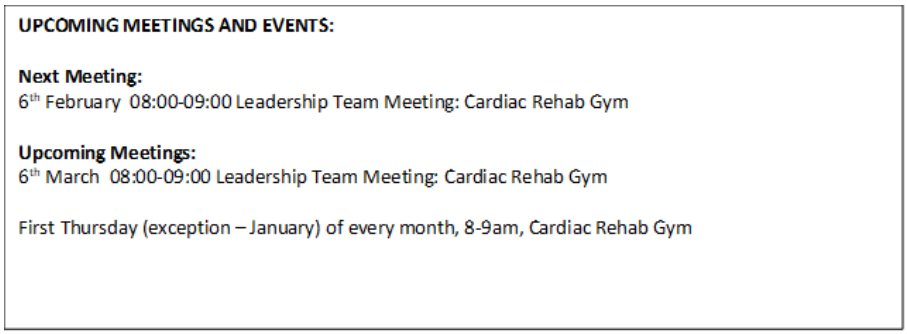
Organisational citizenship behaviour is context-related to our case study in that it affects the mechanisms of change in organisation. The attitude towards change affects whether the Lean programme would be successful and whether any change in behaviour was learned. "Organisational learning as a relative property of organisations that denotes the extent to which an organisation's members actively use data to guide behaviour and promoted ongoing adaptation of the organisations (Edmondson & Moignen, 1998, p9). The Organisational learning approach posits both contextual, cultural and structural facets. The structural affects consist of organisational mechanisms which are institutionalised procedural arrangements or informal practices that allow the organisation to collect, analyse, store and disseminate useful information that is relevant to the daily performance or its members (Popper and Lipshitz, 2000).

Concrete arenas in which experiences of individuals organisation members are first analysed and shared by others and then become the property of the entire organisation either through time or distribution of lessons to relevant units or through changes in standard operating procedures (Popper and Lipshitz, 2000).

Below are examples from Field notes that describe how work on core projects in the lean change programme were accomplished outside the normal work pattern for the clinical team members.

Figure 26 is a portion of the minutes from an ACS project team meeting. Its shows the dates of the next meeting. The meetings were held before work at 8am. The project members came in before their official day started. This was an extra hour of work for them.

Figure 26 Start times for meeting



UPCOMING MEETINGS AND EVENTS:

Next Meeting:
6th February 08:00-09:00 Leadership Team Meeting: Cardiac Rehab Gym

Upcoming Meetings:
6th March 08:00-09:00 Leadership Team Meeting: Cardiac Rehab Gym

First Thursday (exception – January) of every month, 8-9am, Cardiac Rehab Gym

Below the field notes express the sentiments of the team having these meetings before or after work.

Field notes

> *Meetings are not part of business day – seen as good will on part of participants but information needs to be used to complete job. One of the matrons recounted: "Meetings are before and after work – it's not part of the normal routine". There was an expectation that the project group would run itself, with the support of the project manager. However, it was the team members who had to organise the printing of pro formas, the education of the nurses and SHOs, registrars. The breakdown came when the senior physicians did not want to change their work procedures and include this new way of working.*

The project team created a shared purpose for themselves. Their 8am meetings kept them together as a tight unit discussing their ideas for their cardiac patients and general working of the hospital. Often team members went for coffee afterwards and organised evenings out. This camaraderie translated into knowledge shared outside the normal channels of working around managers. It was also the feedback mechanism that the project group used for progress on achievements and changes to the project. The normal channels of email and minutes were only part of the picture. There was a heavy reliance on goodwill. In other words, the informal shared knowledge and taking on extra responsibilities to get the project finished. The information is seen as extra but needed to do the job.

However important the project seemed to be, the responsibilities for meetings and the project work were outside the main work day. Although many resources such project managers, HR business partner, service manager were assigned to the project; no priority was given to the time it took to pass information train staff or devise the plans. Everything was left to chance and the group's own natural ability to communicate and share knowledge.

5.5. Integration of the Myth

This theme relates how St. Lydda's used 'stories' to great 'myths' about Lean and about the hospital. St. Lydda's executives and Projects lead used stories as symbolic objects and action (Burke, 1996).

Organisational myths and stories are vehicles for communications (Kay, 1993, 1994). Brown (1992) and Boje (1991) have argued that stories and myths are not only important tools for learning but also powerful media for bringing about changes in people and culture in the workplace. The telling of stories involves heroic archetypes that serve as exemplars or role models for people in systems. Myths are 'inspiring and instructive stories' (Engleberg, 2013). The narrative of the stories can encourage risk tasking or adherence to rules.

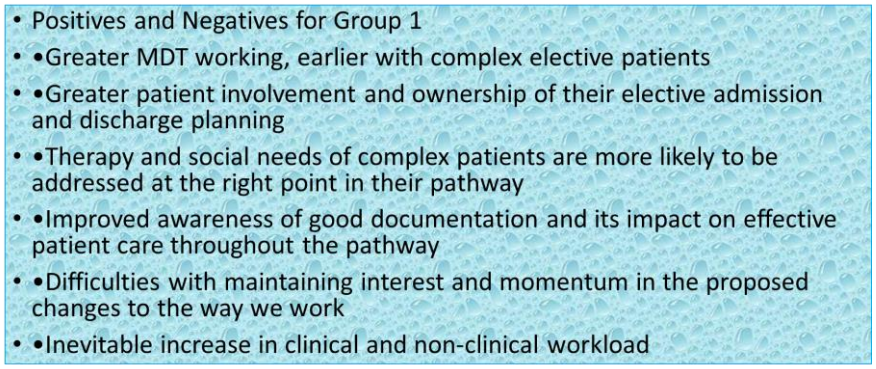
Stories also help employees make sense (Weick, 1979, Bruner,1992) of the past action of the organisation and guide predictions for the future. The Myths in our case study support the 'Lean spell' of success. The Corporate stories created signposts for vision, values and strategy. Thereafter, personal stories help to share knowledge and ideas about Lean and its use. The Myths then develop trust and commitment to share tacit knowledge and facilitate both learning and unlearning. Truly,

the essence of knowledge sharing is story making. "A story is a tiny fuse that detonates in the mind of the listener" (Institute for Knowledge Management (1999) as quoted in Soule, 2002).

Integration of the myth portrays the ideas of the organisation 'behaving in a defensive way in order to promote a specific idea of Lean as the means of success for the hospital. Deceptive narratives were created to encourage employees to think of lean positively and to downplay any negative outcomes of the lean projects. The dichotomy between the myth and the daily work of employees created a barrier to learning are in a number of ways within the organisation.

Figure28 is from a PowerPoint presentation given to project members and clinicians about feedback on a lean project. This is an example where a more balanced view of the positives and negatives is given. However, it is just one example against many of the positive examples given.

Figure 27 MDT feedback PowerPoint



5.5.1. Public Belief in Data

This theme converges on psychological theory of heuristics and adjusts in decision-making in what information is taken in to assimilate into new learning. Crossan (1999) & Huber (2991) both describe processes by which people acquire information in the first step in embedding new knowledge. Cognitive biases in seeking information creates initial dichotomy in evaluation of which information is used or not to create new knowledge (Slusher and Anderson, 1996). Humans need to have a plausible cause and effect (Epley and Gilovich, 2006). People seek to make their judgements are certain as possible and therefore needed data to base their decision on representative heuristics (Tversky & Kahneman). This theme used the idea of Public record of the truth, i.e. public versus private interpretations. The public story is the accepted story.

Competing accounts of organisational actions threaten public belief in data (Beech, Macphail and Coupland, 2009). Stories are used to gain legitimacy (Currie and Brown, 2003). People tell a story to make sense of their experience or the organisation and change (Brown and Humphreys, 2003; Gabriel 2004). They also point toward future behaviours (Ybema, 2009).

Paradoxes contest the stories of change (Lewis, 2000). Knowledge of the outcome is inherent in the judgment of hindsight. Clinical epidemiological studies have a strong link with relying on backward looking reviews of data. In other words, the story fits the data that has already been presented. In this case study, CG acted in this way to present data that fit the story.

Levitt and March (1988) referred to organisational learning as history-dependent. In this way, the historical data provided by CG became the platform for learning about lean. Furthermore, in Huber's (1991) notion of information was referring to data in a from that 'reduced ambiguity and uncertainty. Data supported beliefs that encouraged cause-effect relationship and those were re-interpreted as 'know-how'.

This example for this theme highlights assumptions being made by the organisation in its use of language when presenting data to other executives and financial decision- makers. The public story was creating a service improvement team to improve patient care. The paradigm of the narrative was to present a positive change (Beech, MacPhail & Coupland , 2009 Antocoupoulou, xxx).

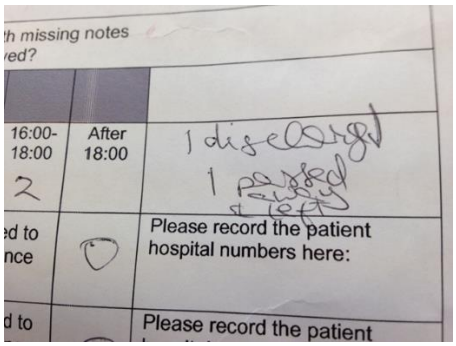
However, the CG use income ranks versus patient care; In selecting the ICP CG 'presented an analysis of Trust Data to support selection of the pathway and collectively agree the are area for the work'. CG had full access to the trusts SLAM (service level agreement measurement) data. This data is used to determine repayment of Tariffs from the authorising agency, e.g. CCG (Commissioning Care Group). CG would not fully explain how they selected the data. They did not use all years and all patients. They used selected months from the previous 5 years of data for each morbidity. For example, Congestive Heart Failure, they kept in tight age ranges and time frames without readmits.

There was a tendency to over-state the successes and ignore any problems. The consulting group did stay in the hospital very long and therefore did not follow the groups to see if sustainable change had been made or if the learning had indeed been embedded in the organisation.

The Hospital continued its theme of portraying itself as an exemplar for Lean methodology. The hospital ran a 'Perfect Week' exercise. This exercise involves observations on every single ward for every single shift for a week. Various data are collected on discharge times, bed moves, patient wait times, patient transport, discharge lounge, communication between department e.g. A&E and Wards) etc.

Figure 28 Below is a photo of part of a form that was used for data collection in the 'The Perfect Week'. It's a bit tongue and cheek but it showed hoe as project members, people were seeing he ridiculous in the Lean projects. The staff were asked to note every thing that happened on a ward and this person wrote 'patient died and left'…. We laughed when we saw it thinking maybe the person flew away on their wings.

Figure 29 Perfect Week Notation



One version of the truth

This theme explores the phrase used in the hospital during the Lean programme 'one version of the truth'. It is in fact a tag line from a national software provider that specialised in medical data.

In software technology the 'single version often truth (SVOT) refers to the data storage principle to always source a particular piece of information for one place (King, 2003). In this case study, St. Lydda's had hired a software company to produce an add-on software package to search for HF patients. This list created by this software programme would be considered the definitive 'truthful' list of patients.

However, in order to be able to cope with mountains of data facts and lists people rely on narrative structure. The narrative construction and reconstruction (Rhodes and Brown 2005) build a platform for management storytelling on which to base future decisions and hierarchies of power.

Some stories contain facts. Such facts are not always straightforward (Connell, 2003; Gabriel, 2004) and can be influenced by outsiders.

'Truth' becomes based on specific pieces of information that behave been distilled from narrative constructions and used as a representation for the whole. This representativeness heuristics (Epley & Gilovich, 2006) skews the tacit knowledge that becomes embedded in the organisation.

There was cherry picking of data and interpretation of AC patient and CR percentage uptake. Yet the software develop company would report that he had one version of the truth. This was reported in public meetings and presentations.

The senior maanger felt that the Software company could deliver a 'one version of the truth' about patient data. The Software company's website claimed to be able to do that using the tag line 'one version of the truth'.

This is a combination of notes from a software meeting and comments made after the meeting. The nurses were annoyed because the focus of the meetings was on the software and not on the original intent of the project.

Field Notes

> *From CCG meeting From Publication material of SoftwareCo EHR PR An extension of the St Lydda's One Version of the Truth diagnostic work had been requested through the System Resilience Group. This phase of work would be over a six week period, after which it would be embedded as part of the wider system. The request was agreed– funding for the work was paid through national penalties applied to the SGH contract with the cost split across organisations.*
>
> *The focus was lost 'because some of the consultants used this project to further their own ideas' (HM) " Every time we meet it seems the project shifts to the next flavour of the month" (HM). "We are just trying to our jobs as best we can, it doesn't help the CG comes in and tell us that we have to learn to do our jobs differently"(HM). "I'm not really sure the point of having CG here, we know all this already but some managers*

want to keep control over us and make us do things in a certain way" (KK).

The topics of the meetings changed over time as well as the content. In the beginning the meetings were focussed on cardiac rehab and getting more patients into that track. They also focussed on the measurements of rehab to gain financial reward from increased numbers of patients going to rehab in hospital rather than as just follow up. But as you will see in other examples, The Pro forma were not being filled out correctly. The data was often incorrect. The data validity and reliability was always in question as an aggregate set of data. Individual decisions about patient treatment were maintained through good clinical practice but not as an overall system.

Public statements became the focus of the project. Any results that differed from the publicly state goals were supressed or presented in a way that gave the hospital a more favourable view.

5.5.2. Myths Stories and Lies

This theme concentrates more fully on the myth itself rather than the integration of the myth into routines and work. In theme 'Integration of the myth', I explore how the myth influenced beliefs and learning. This theme is about the myths themselves.

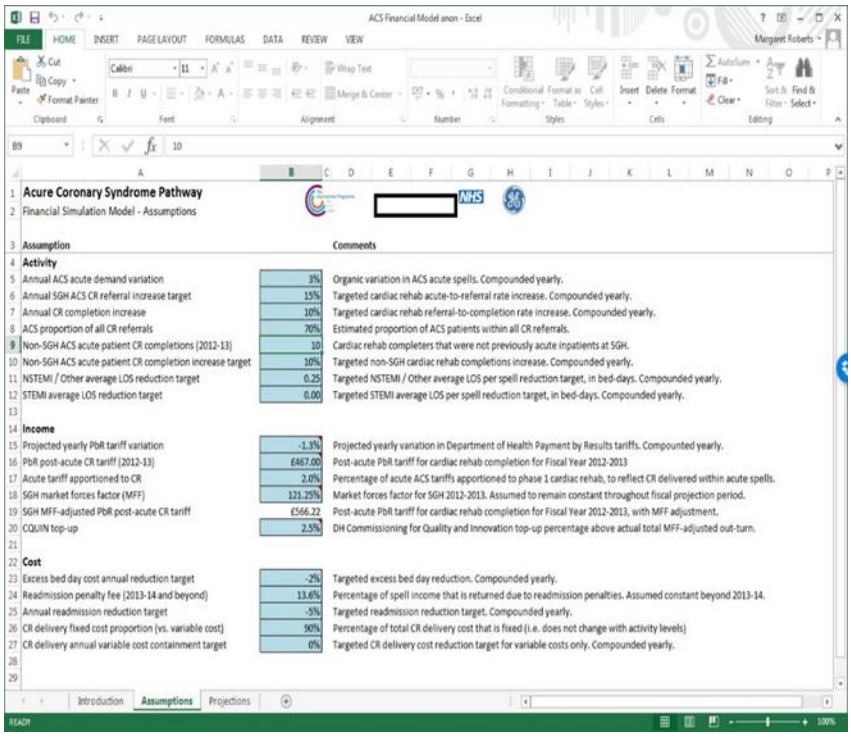
Myths are described as a means through which routine and ritual were understood (O'Gorman, Gillepsie, 2010) stories are used to strengthen and revitalise current norms and methods.

Storytelling can be powerful persuasion, free to disseminate throughout an organisation and stories help employees to make sense of what is happening the organisation (Weick, 1995; Gabriel, 2004). Stories are not merely arguments and counterarguments but a distillation of events or facts that are given credibility. Storytelling translates the dry numbers into something coherent and compelling. The Stories encourage people to act in unfamiliar ways. Narratives cope with emergent phenomena and phase changes that are by nature unpredictable. When stories reach an 'epic' statu , they become myths in the organisation. They have even greater influence over the organisation's culture. Myths then give rise to the archetypes in the organisation and those ideas are reinforced. The stories and publicly declared ideas of an organisation help employees to form an idea of how they should act and carry out their responsibilities.

Story telling in organisations is not new (Gabriel, 2004). St. Lydda, in particular, used stories to create an image of improvement and efficiency (Gioia & Chttipeddi, 1991; Maitlis & Lawrence, 2007). They wanted to create a sense of excitement and change. Public presentations, posters, plasma screens with rolling vignettes about Lean achievements were placed around the hospital. Lean awareness became part of the Induction for new employees. Ideas for new projects were solicited form employees (Flinchbaugh 2008; Hu, et al 2016). St. Lydda's relied on the external influencers to enhance the belief in the hospital and public institution.

Figure 29 illustrate ACS financial model as created by CG. The reality is that CG made adjustments to data to maximise the producing examples showing that CG had been successful in reducing LoS and increasing tariff recovery. However, it is likely that this was a faulty assumption model.

Figure 29 are excerpts from the data models used by CG.



Conflicting clinical Self Image

This theme describes the quandary expressed by some of the clinicians in the teams. the phenomenon that they held a role as a clinician and a role as administrator but also a role a change champion for the Lean project. The priorities and outcome for those roles were often at odds with each other.

On an individual level, employees need to see themselves in the narrative of the organisation. Their social identity as part of the myth and the stories of the organisation are as important as their formal role. Schon's idea of the reflective practitioner that an individual pays attention to their own actions which informs behaviours and continuous learning. Clinician's' jobs have an inbuilt mechanism for reflection in their work and through review of medical charts. The medical tradition of a Mortality and Medical review embeds the idea of reflecting on practice in to the role of clinician. The medical profession is highly compelling and constantly developing new starts and about disease and its treatment. While they are many instances of positive feedback, the work also involves uncertainty and emotional intensity.

Reflection helps improve practice and identifies opportunities to improve quality and patient safety. The GMC education standards advises clinicians to use a simple method of so what (feelings and now what (doing).

Thinking focusses on processes and particular details of the cognitive aspect of learning in medical treatment. The feeling ascribes values and emotion to the experience, in other words the

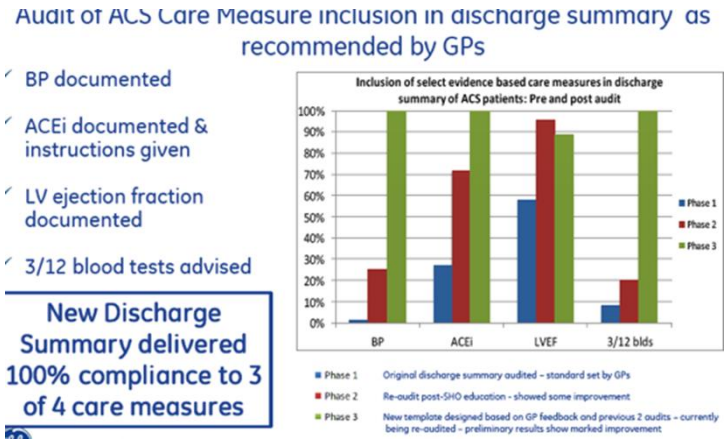
behavioural aspects of the learning. The doing aspect identifies which future action ought to take place.

This is how clinicians produce their claim as a competent medical professional. Treating patients requires more than just tending to the physical aspects of the disease, the appointments, the procedures. It's about mapping the patient's progress in every aspect from physical to mental or administratively.

Being part of bureaucratic organisation, the legitimacy of the clinicians does not carry over into their administrative duties. Physicians are trained to lead decision making where they understand the parameters but very little is done to teach them financial and business acumen. Medical professionals often see administrators as being on the 'other side' of the equation to treating patients. The idea of lean was viewed with scepticism by those who regarded their role to be purely medical.

Figure 30 is part a PowerPoint to show how well the clinicians were doing in t arms of liaising with GPs. It was important to clinicians to show what progress was being Meade medically.

Figure 30 Audit of New Summary Discharge Forms



5.5.3. Fads and fashion

This theme is related to myths and stories themes but focusses on the notion that Lean was a trendy fad. Myths and stories have long lasting effects on organisations, but fads also influence. Fads create excitement and encourage change by creating a buzz around new methods and ideas.

Fads are attractive to consultants and managers for their simplicity and their energy. Management fashion has usually gained momentum because of a particular problem within an industry and a neatly packaged story presented to an organisation's executive (Miller and Hardwick, 2002). Fads rely in part on storytelling, an essential part of persuading others to change in the organisation, as previously mentioned in other themes. Fads tend towards the perspective and universal 'one size fits all' instructing the organisation in how to solve problems. Fads also bring high hopes with their energetic seemingly easy problem solving. Management Gurus give credibility to fads by perpetuating the success stories from other organisations or projects.

Abrahamson (1991, 1996) and Abrahamson and Fairchild (1999) suggested that organisations follow consultants firms and management gurus by adopting their fads & fashions. Organisations facing

uncertainty look to external validators such as management consultants for answers. Without clear direction or strategy, organisation executives follow the fashion. These decisions can't be explained by rational choice. There are psycho-social factors that influence when, why and how to adopt new management techniques.

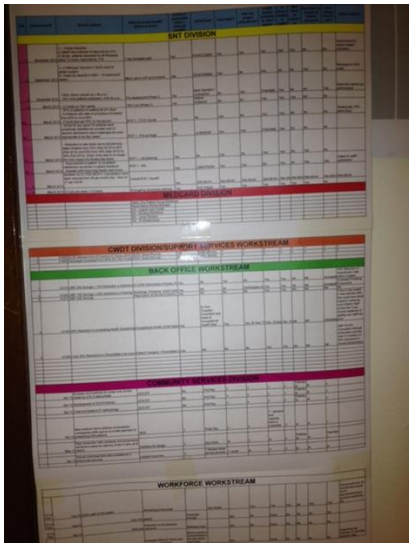
Management fashion is explained as 'largely cultural phenomenon', gravitating towards a simplistic answer to current organisation problems. Abrahamson and Fairchild (1999) posit that over time the management fashion will decline in use and new fashions will emerge. The diffusion on the innovation introduced by the fashion depends on its fitness for purpose to the organisation. Some fashions are adopted and do change with the organisation but they may change name or focus.

An important aspect of management fashion raised by Abrahamson & Fairchild) was the idea that there is a 'market for discourse'. The discourse belonging to the fashion will contain jargon, labels and technique s which enable the organisation to meet its goals. This is progressive and changes over time, examples like Quality Circles and TQM. These labels are metonyms for the actions and organisational culture change that takes place.

St. Lydda's gravitated toward Lean as a methodology because its popularity had increased among Public Sector and NHS facilities (Abrahamson 1991, 1996; Ferlie xxx , Nutley & Daviesxxx) The 'lean Spell' (Hyde, McCann et al) was enticing to management team with its promise of efficiencies and money savings. The management team of the hospital closely aligned themselves with other hospitals who were early adopters (Newell et al 2001). The ideas of lean were promoted as Best Practice. Lean was a fad concept that waxed and waned in manufacturing but now had gained strength in the public sector, especially healthcare. Although Management saw Lean as 'magic key', Employees saw this change fad as a passing fancy. Employees did their best to 'follow' them with the least amount of involvement possible. (Abrahamson, 1991, 1996: Abrahamson and Fairchild, 1999). The promotion of the 'fad' as a belief was created in part of self-promotion and reporting.

Figure 31 is a photo of one of the 'update' boards' showing various Lean projects.

Figure 31 the Update Board



These are the reported projects and their corresponding successes such as: reduced waiting times, smoother ward discharges, greater capacity in theatres, more efficient pre op procedures. The work-streams represent different areas of the hospital and meant to portray a widespread effort for improvement. Taken at face value, the Lean project seems to a marvellous success but the comments from administrative and clinical staff on the wards reveal

Short term effort

This theme is used to describe how employee expressed concern that the implementation of lean would be short lived. They had already seen changes to the programmes from its inception in 2013 to the daily working routines. Change is difficult to achieve under most circumstance. Employees need a compelling reason to change (Senge, 1990). The idea that lean was a fad (see fads and fashion theme) made sustaining the change an even greater challenge.

Change, learning and lean initiatives have a lot in common but most organisations, including St. Lydda's, often see them as distinct initiatives with separate parallel goals (Flinchbaugh, 2008). Employees experienced lack of support from managers as well as lack of resources (Kotter, 1996; Senge 1990). The Lean movement (McCann, Hyde et al xxxx, Ferlie, xxxx Nutley and Davies, xxx) lacked the fundamentals to sustain a change as Kotter (1996) set out. The compelling story was compelling to the senior management executives but lacked depth and truth for the rest of the clinicians. Role Modelling was difficult to follow because most of the exemplars were outside the hospital or using slightly different methods for their change. The reinforcing mechanisms of paperwork and procedures were onerous for most of the conical staff. The Capability building to learn new methods was hampered by several factors. Learning, especially under a change programme, requires: time for knowledge acquisition (Huber 1991), freedom to confer with colleagues and sharing knowledge gained from experiential learning in the new system (Crossan et al 1999, reference), building a community of practice (Brown and Duguid, 2001). These things were lacking in the implementation of lean at St. Lydda's.

One of the presentations given to the hospital staff about the new implementation of lean had the quote: "Change is not the goal, the goal is the goal" The goal is this case was efficient working of medical procedures. No waste, no rework, no confusion. Patients discharged on time, patients go to rehab when appropriate, medical procedures recorded in a way that helped tracked the patient population of cardiac patients

By the February 2014, action logs had completely replaced meeting minutes. The action logs were a record of status on individual actions. Each person had the area of responsibility, e.g. IT, procurement, continuing cardiac care, admin. Every meeting was an update on what had been accomplished since the previous session. 'Risk Log' appeared to caution when something was not getting done. Frustration was at a very high level. The meetings were not only monthly instead of fortnightly. The 'meeting' was an information gathering session to find out who needed to 'trouble shoot' in their area. Many off-line meetings were held to attempt to get the work done. The meeting would last an hour and then afterwards people paired up to 'discuss' (complain really) about their action point. There was no challenge to the chief consultant's decision. He would not listen to objections about timelines or difficulties that individual members were having in convincing staff to instate changes. You can see from this example that deadlines are months out of date.

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Progress has not been made on the project. In Ref 2 of action log, the action is about coding. This relates to pro formas and NSTEMI vs STEMI and the treatments the patient undergoes. This is a crucial part of the learning of the new lean method. Even though, this project is deemed nearly ready to handover to 'business as usual', this item is months out of date. The staff are still being circulated memos on how to do the coding.

Figure 32 is a further action log showing the change in emphasis in the meetings and that things were not being record properly here either. Actions are past due and people are commenting on them as if they have already been achieved.

Figure 32 Action Log

ACS Pathway Leadership Team Meeting	
Date	20 February 2014
Time	08:00-09:00
Location	Cardiac Rehab Gym

Attendees:		Apologies:	
(KR)(Chair)	Margaret Roberts (MR)	(RR)	(KK)
(AC)	(CS)	(LB)	(PL)
(HM)	(GM)	(JG)	(KOH)
(HG)		(EH)	(KT)

Ref	Action	Owner	Date Due	Dependencies	Comments	Status
2	HG/KR to circulate coding action plan to team	HG	01/11/2013	TD writing plan	HG has met with coding team and next meeting set for 3 April	Open
4	KT to continue to chase procurement for proforma ordering	KT	01/11/2013	Agreeing outstanding changes to proforma	Changes made to proforma (see 27)	Closed
5	NF to inform SHOs that all ACS patients are to have an echo as an inpatient	NF/MP	17/10/2013	None	As the SHOs have now changed over, we need to recruit new SHOs into the ACS ICP team. MP to identify new SHO rep and share SHO rotation with ACS team	Open
8	Templates are ready, MP needs to arrange for admin support	HM/MP	17/10/2013	None	Templates are ready but need to ensure funding in place for Admin staff to support it	Open

Crossan Maurer and White (2011) had described as a kind of dialogue that would convey meaning and shape action. This disconnect I observed was that the intended shared meaning was the public face of the 'lean' change and the subversive dialogue that existed between employees created a different shared meaning. So again there was surface acceptance and understanding of what was acceptable and a suppression of actual application of lea or the discarding of the 'real way' of doing things in favour of an adaptive method.

It turned the application of lean in to a time counting exercise. Nurses filled out forms perfunctorily and carried on in their own best wisdom. Senior registrars told junior SHOs to do what they'd always done but would report to those CG people that change had been made to forms and information gathering. There was no true acceptance of new methods and forms.

Learning and change are linked in definition and in practice. Learning involves some elements of change in behaviour (Elkjaer, 2004) change in cognitive skills (Huber, 1991) or a change in psycho social outlook (Anatoncopoulou, 2006). Management theorists recognise that an organisation's ability to change depends largely on learning and adaptation. Learning, in this sense, is both individual learning and the collective learning that is transferred into the organisation's practices and routines (reference). Becoming a learning organisation involves continuous learning and change (Easterby-Smith, 1997). Organisational learning is an enabler to change as a support for the effects of change and as a seeker of new knowledge form new experiences.

There are many ways in which organisational change can take place through learning. In daily work practice, individuals can take note and reflect on success and incorporate ideas into the next experience. Furthermore, individuals can share their experience n the group setting and devise new home grown methods of work practices.

In our case study at St. Lydda's, there appeared to very little sharing of work experiences making it difficult to change an individual experience into a 'collective learning' for the entire organisations (Rampersad, 2004). The learning process should involve discovery and experimentation in one's own work practices and in new methods being introduced. The rapid change projects at St. Lydda's were designed to encourage experimentation around the medical procedural work methods. The principles of change and learning were expressed by leaders but the spirit of change and learning was not engendered by leaders. The focus had become on the paperwork, the forms, the recording of procedures instead of the actual procedures themselves.

5.5.4. Casting lean spell

The theme examines the phenomenon of lean being hailed as a magic spell. Lean has had a groundswell of support in the medical field. It promises to eliminate waste and streamline process that have become burdensome. Lean is advertised as being able to cope with complex systems and restore equilibrium and vitality to operations. This is how the Senior executives and managers described Lean.

The NHS and US hospitals gravitated toward using lean as a change strategy to increase efficiency and raise the standard of performance. Lean offered a means to reduce length of stay, reduce waiting times, increase patient satisfaction (Westwood et al, 2006, Nutley and Davies, 2001). The promise of lean was locked into improvement by standardisation. The essentials components of lean were about taking out unnecessary steps seemed ideal to apply to hospitals and GP surgeries. Initial change projects saw success where procedures had been established years ago and needed refining and revising because volumes of patients had changed dramatically in the intervening years since methods were established.

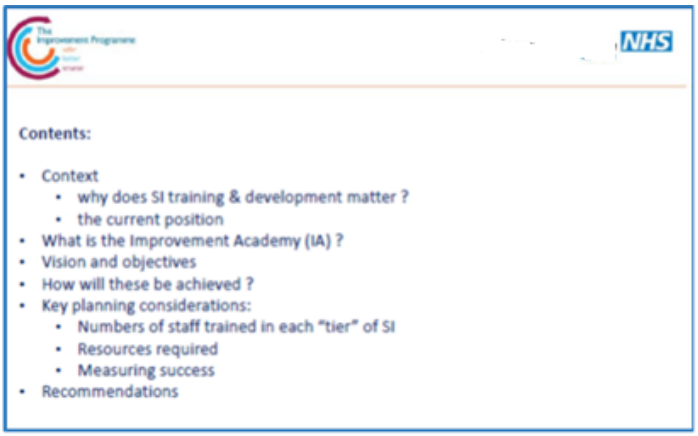
Hospital and healthcare delivery had traditionally relied on a highly skilled workforce to make in-action compensation for operational difficulties. The attraction of lean was to overcome waiting times and queues (Womack and Jones, 1996). Lean would provide a focus for patient flow being measured, and identifying the touch points from healthcare workers. Patient movement would be

mapped so that each patient would be followed until their 'illness or problem' had been resolved. Alongside the mapping of patient movement is the recording of the ancillary treatments and procedures that accompany particular illness. For example, our heart failure patients might have co-morbidities that required contradictory or complementary care. Patients may require may different kinds of treatments in order for them to be 'processed'. Modifying the methods and procedure with Lean would mean a streamlined process so that the most difficult cases could have greater flexibility and time. It would also mean the clinicians could learn from mistakes by undergoing the process of mapping the patient journey. Improvement in the quality of healthcare was the honey pot for introducing such ideas into hospital (Womack and Jones, 1996).

This was an attempt to create an institutional process of lean efficiency. It was hoped that employees would embed these routines as part of their ongoing daily working routine. Training was given to first impress the ideals of lean upon employees. However, as Lok & de Rond (2013) showed learners can ignore the institutional teaching and develop on their own other micro processes subversively.

Figure 33 is part of PPT to show hot the Service Improvement office was set up as a The Improvement Programme or [TiP] as catalyst for change. The mission of office was to have Project managers as internal consultants, clinicians as change agents.

Figure 33 why does Lean Matter



5.5.5. Lean solves all

This theme follows on form the 'Cast lean spell' theme. It describes the way in which executives and Service Improvement project leads would propagate the notion that lean could solve any problem in the hospital. If something was difficult to do just put a lean process on it and that will fix it. Quality , efficiency and clarity would all follow if Lean practices were instituted throughout the hospital.

The Service Improvement department was created at St. Lydda's to provide guidance and tools for the implementation of Lean. As in in previous incantations of the idea in other hospitals such as the Royal Bolton and Virginia Mason in the US, Lean programmes were seen as essential to help embed

the ideal and the tools to change systems and procedures (Ben-Tovim et al, 2007; Fillingham 2007, McNulty and Ferlie, 2002, Nutley and Davies, 2000)

A lean Programme helped to create a shared language amongst the project managers and members as well as a full training programme for using the methodology. The focus of lean then become part of a learning activity and part of the cycle of continuous learning (Fillingham, 2007, Flinchbaugh, 2008). In order to be able to improve the process within the system, people themselves need to learn how to improve their own working practices (Furman and Caplan, 2007, Tucker and Edmondson, 2003, Flinchbaugh, 2008). This increased the scope and the influence that Lean can have over the entire process of working within the hospital (McCann et al, 201).

Lean also become part of the social fabric of the hospital. References to the tool and Lean process became part of a team's vocabulary thereby embedding into the community of practice (Flinchbaugh, 2003, Fillingham 2007, Brown and Duguid, 2000, Crossan et al 1999). Mann (2009) suggested that the social aspect of lean was necessary for its success in embedding new routines through an organisation. Lean went beyond patient but straight to the heart of all operations, language, perception of employees (Waring and Bishop, 2009; Taylor and Taylor, 2009) 'Lean solves all' became the watch words Improvement Academy Strategy.

Figure 34 is a powerpoint slide extolling the virtues of the improvement programme and what it could for the organisation and for clinical teams.

Figure 34 Lean Delivers!

System as panacea

This theme demonstrates how the executives at St. Lydda's regarded lean and systems thinking as an overall solution to the hospital's problems. The basic tenets of systems thinking are embedded in medical practice in terms of checks and balances. However, every day working in the medical field tends to be more linear. A linear approach requires a step by step assessment of component pieces and focus on content and assignment of duties. All of these things are necessary to engage with patients; eg bed notes, med notes. On the other hand, systems thinking is charged with looking at the overall picture and trying to identify patterns of behaviour and trends in outcomes. Executives would try to explain about systems thinking and its holistic approach but the clinician didn't have the capacity or energy to put into understanding how it applied to their every day work.

The route to improving patient care was seen as 'raising performance' (Gawande, 2007). While the expectation that each individual clinician would come to work wanting to their very best, there were times when systems and processes made this difficult (waring and Bishop, 2010). Ambiguity and patient variation often conflicted with known decision making models forcing clinicians to provide bespoke solutions. Over time these 'workarounds' became a patchwork of different methods to be called upon depending on the clinician and situation. This silo approach to health care positive and negative outcome for patients. In addition there was m no mechanism to reflect on learning form one patient to the next.

Below arefield notes from the Lean Launch Day with an external speaker for National NHS drive for Efficiency and Agenda for Change. Lean was intro introduced as a continuous and systematic elimination of waste' (Waring and Bishop, 2010).

Field Notes

> *We're Part of a challenge……..Tackling quality safety and productivity together*
> *We've (oh plueeeze)……..Harnessed the skills working in the organisation…..Not twenty people with the word manager in the title…. (note in margin omg she is so ffull of sh** ….. almost everyone has manager in their ffs)…..Engage people and provide with resources*
> *……Provide with training*
>
> *We learned……And made a resources available….(note in margin - HA! Fat chance of that… giggling with CNZ)….. Showcase is to take stock …….Celebrate the work that you have done over last year (Note in margin – unbelievable)……But also to challenge you that the work needs to continue…. People have embraced the challenge (note in margin - what????)*
> *Take responsibility and 'step up to the plate'…. (how about KR and MS and AR take some of the heavy lifting….???) ……Take on public's expectations (CNZ mutter next to me …. Oh here we go…)*

Lean was seen as an opportunity to develop every employee into continuously improving their own work and methods and applying the tools to all processes (Balle et al, 2006). Many of the original Lean writing emphasise that lean is a system thinking not just a set of tool (Flinchbaugh, 20003).

Training all staff in some capacity in lean was seen as the answer to spreading lean across the hospital. dissemination of information on lean as part of 'everyday life'

In this study, the idea that NHS provides evidence based medicine in a positive and secure manner is an overwhelming desire. Patients, doctors, suppliers, funding agencies all want to believe that the NHS acts on data that is accurate and true. Whilst, I am not claiming that falsehoods and fraud are being committed, there is a faulty premise in the decision making (Argyris 1993, Popper and Lipschitz, 2000). The public face of data is accuracy. The quotes from interviews and the comparison with documentation shows fragmented data. It can be manipulated so that it doesn't accurately represent the original interpretation. Embellishments and over-statements over time cause further embellishments until public statements hardly resemble the actual work that is going on.

The consulting group (CG) was brought in as a Proof Of Principle approach for Lean in hospitals. CG pledged time and resources to the hospital free of charge for an initial period of time. They were given access to data to make a determination for which chronic conditions and departmental areas to focus on. There was a vested interest on the part of CG to show that Lean could provide a structure to improve efficiency and patient care.

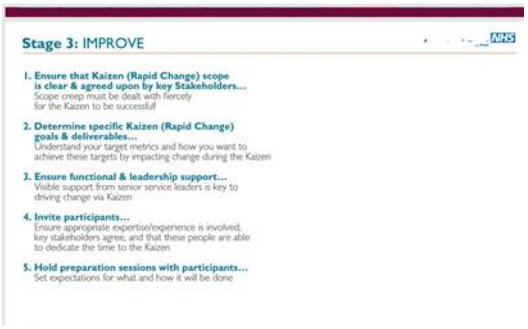
CG introduced the concept of Kaizen week which was a 'blitz' week that tried to change procedure in several areas of the hospital. The idea was to identify 'quick wins' such as clearing Ward stock rooms and re-labeling storage containers to be clearer about where materials should be stored so nurses could find things in a hurry. CG attempted to show the hospital what was possible in terms of change and efficiency that would make a difference to patient outcomes, e.g. lowering length of stay, more patients in rehab, longer life span, fewer readmits

MS, the chief executive of the hospital "We want to see if we can make consistent change". There had been other initiatives within the hospital in previous years that had made progress and cost efficiencies but these were never sustained. "We want to embed a good clean system into healthcare; it's about patients but also using resources wisely" said an external expert that came to speak at the hospital.

The ethos of CG was to "Get everyone behind the idea to change": their version of change anyway. CG had a one way approach to creating efficiency in healthcare. They saw the lean process as wholly transferrable from the manufacturing sector. In the way it is taught within the hospital and in the shorthand they used to speak about units of measure and movement of goods and services and people. When you heard a CG consultant speak, it sounded as though he was describing a car repair service rather than a clinical care service.

Figure 35 below is illustrates how the presentations were set up make staff believe that lean would improve. All Of the language is about how lean will improve the procedures, the processes, the daily work. The Project Improvement team was describing Lean: if you just followed this procedure, everything would improve.

Figure 35 lean Improves



CG peddled the idea that everything in the hospital could be improved with a lean process. With a cult like enthusiasm, CG management consultant would explain that Lean was a way of changing anything in the hospital. You could take any problem, process or difficulty and get people to learn a new way of doing things through Lean methods. Anything could be embedded in an organisation through Lean. This kind of belief in Lean made some clinical staff cynical and suspicious. Publicly, Senior leaders and executives in the hospital would agree with CG.

Time counting

This theme highlights the comments from team members as they struggled to understand how form filling and bureaucracy were helping to improve patient care. the clinicians and support staff viewed the lean as a burden, something to 'get through' just so they could get on and do their 'real' work.

One of the most difficult problems for manager in organisational change is resistance from employees. Resistance can take many forms from slowdowns, work-to-rule, emotional withdrawal, silence, hostility, challenging all manager requests not just the change. A popular solution the problem of resistance is to engage employees with the ideas of participation. The Object of participation is to encourage employees to look more closely at the work they are currently doing and compare with the new method, to ask questions about how the new wok will be done. In an ideal world, there would be feedback loops from management to employee and vice versa. Lean methods and continuous learning theories (Filingham, 2007. Flinchbaugh, 2003; Waring and Bishop, 2010).) embody these ideals. However, even if there is participation in meetings or discussion this doesn't always translate into full cognitive and behavioural participation. Employees may create a façade of acceptance to the new organisational values and change (Hewett, 2003). Previous research has concentrated on impression management (Kacmar and Carlson, 1999; Wayne and Ferris, 1990) or surface acting and emotional labour (Brotheridge and Lee, 2003).

In this case study, the surface acting manifested itself as surface compliance work, Participating to the bare minimum in the Lean activities and resistance to both learning and change.

Participation in change is only part of a change programme's success. Employees need to be committed to change before it can have a lasting effect on the organisation. Beyond the financial and efficiency reasons, clinicians did not see the purpose of the change. This I was especially difficult

because many of the lean projects introduced more systems checks rather than made differences to patient care. Change and learning both require adaptation to new stimuli and environment (Fiol and Lyles, 1985, but in this instance the stimuli, lean principles seemed counter to the core work of patient care. The emotional dissonance (Fineman, 2000) couldn't be easily reconciled between lean systems and patient care.

Deshler and Hogan (1990) supported the notion of social approaches to learning and change, where acceptance of the change was promoted under social conformity. In this case study at St. Lydda's, the effort to learn something new and change to a different form of working lacked the elements of: shared knowledge (Lam, 1998), a social learning component (Brown and Duiguid, 199() and a clear direction (Fiol and Lyles, 1985).

The field notes below describe how staff put in the effort to superficially comply with new orders but they have not fundamentally changed the way they think or perform their duties. They learned to fill in the right boxes. They make an art of appearing to have adhered to the new way of doing things. Most of the energy is expended to write on the forms what looks like the appropriate thing.

Field Notes

> *Matron HM talked about how the care fundamentally hasn't changed. Numbers aren't different in the uptake of cardiac rehab. The nurses are following the same procedures they always have in caring for patients, they are just filling in different forms.*

Nurses filled out forms perfunctorily and carried on in their own best wisdom. Senior registrars told junior SHOs to do what they'd always done but would report to those CG people that change had been made to forms and information gathering. It turned the application of lean in to a time counting exercise. There was no true acceptance of new methods and forms.

Process over substance

This theme explains the complexity of the lean programme that needed both attention to detail and creativity in change. The observation of the clinical team was that the processing of forms and the adherence to procedures was more important than the substance of improving patient care. The change was focussed on structural details not the true essence or reasons for improvement.

Change programmes usually involve strategy from top executives; they set targets and have a plan for implementation carried out by middle and junior management and perhaps specialist teams. The responsibility for the design and implementation comes from fairly senior employees who have a vision of an overall outcome. The actual implementation relies on project managers, and individual contributors in teams to carry out the changes. The definition of change is seen as a 'shift n behaviour of the whole organisation' (Kanter, Stein, Jick, 1992). Organisational change requires adaptions of internal process and change in individual and group behaviour (Senge, Kliener, Roberts, Ross and Smith, 1999). Senge in particular emphasises that change must be planned in consultation with employees. Planned changes have a specific purpose to be part of a continuous adaptive

learning cycle (Lawrence, Dyck, Maitlis, and Mauws, (2 006). There has to be a certain amount of emotional energy applied to the change otherwise the employees will not focus on change their mind-sets to the new direction of the organisation (Lawrence, Dyck, Maitlis and Mauws, 2006).

Change programmes must monitor two things both the changes to the routines and procedures and the 'response' from employees about those changes (Nikols, 2004). Of particular relevance to our case study is the idea that individuals 'unlearn old routines and learn new ones' (Postrel and Rumelt, 1992). This can often lead to employee's resistance, because performing the new routine leads to emotional dissonance or role conflict or is seen as a subversion to professional abilities. Employees may engage on defense mechanism (Bovey and Hede, 2001)

In this case study, the observable outcome of the resistance to change was the superficial adherence to the new routines. An illustrative example of our case study was the form filling done by Nurses. The pro forma and software 'boxes' were completed but the everyday work routines showed little actual change. So again there was surface acceptance and understanding of what was acceptable and a suppression of actual application of lean or the discarding of the 'real way' of doing things in favour of an adaptive method.

Figure 36 Corporate document screen grab from the feedback report to senior executives on how successful the form filling was on the ACS proforma.

Figure 36 ACS Feedback report

Audit of ACS pro forms
Summary
Approximately 50 cases were reviewed for entry into the database. Only 50% of patient records had ACS forms. Of the remaining 50%, only one form was complete. The rest of the forms had minimal information, approximately 1% of the information filled in. Extraneous information appears frequently on the forms, e.g. notes in margins. More encouragingly, Page 13 was always complete.

In the patient records with missing forms, there was no discernible pattern between time, day, ward or diagnosis.

Contradictory Info
There is information gathered as narrative in the margins that is contradictory to the 'ticked' boxes, e.g. Premature CAD

Time points
Onset of symptoms is usually recorded but other time points are left blank.

CATH Lab
Outcomes only partially filled in
Vessels section not usually filled in\Time flows hardly ever

On-going Care
This is rarely filled in

Continuing Cardiac Care (Page 13)
Always filled in and complete

CG claimed that getting patients to Cath lab quicker because identification of STEMI and NSTEMI patients was much faster with more accurate data. CG listed the 'problem' and then 'what we've done', e.g. designing the ACS pro forma. The 'we've done' portion of the statement was a complete lie as the idea of this pro formas had come from the former workplace of one of the cardiology consultants. Furthermore, identifying the patient quickly would entirely depend on getting the information in a timely manner. Reviewing the forms for St. Lydda's. The emphasis of the date and time stamps were revealed as a source of tension. In a three months review of the pro forma almost none of the date and time stamps were used. (see appendix 1 ACS pro forma review p 190) there

were sections that were completely ignored (GRACE scores, Time points, CATH labs, on-going care). The only page on the pro forma (page 13 of Pro Forma) that generally filled in was the one that nurses were responsible for. 3 cardiac consultants names keep reappearing as the supervisors to the SHOs who were not filling in the forms. These consultants refused to influence their SHOs and registrars to use the pro forma and to fill in accurately.

All of this was disregarded when it meant stating publicly what had been achieved or been changed because of lean methodology. It was hard for the nurses to hear the manipulation of the organisational narrative. Patient safety and care was still at the forefront of their minds but to their own personal cost and not because of a system that had been introduced. Below is an excerpt from the presentation given to Senior Board members as a midway report on how the project was progressing.

Standardise reporting

This theme covers the drive for consistency in maintaining the order in the lean projects. Any large scale project must have governance and reporting documents. In the medical profession, documentation has always been regarded as an important aspect of the job. Documentation helps to review past decision, trace anomalies in care and individual differences in approaches in medical professional's' standard of care. Standardised reporting helps to measure progress both in terms of patients but also in the change projects. In this case study, I observed standardised reporting being used as 'proof of following lean'. The Clinical members of staff used their seeming 'compliance' n reporting as their contribution to change. Senior managers were 'satisfied' that Lean had been accomplished because they could see 'reports' of the changes.

Lean was introduced to help to standardise process around the best practice that already existed within the hospital amongst clinicians (Radnor, Waring and Holweg, 2012). In a medical environment where professional require and demand evidence before acting, lean challenges some of those assumptions. Shortell (1998) emphasised the need to link evidence based medicine with evidence based management,that is a focus of measurement and continuous improvement to routines (Feldman and Pentland, 2008). The routines can evolve over time with continuous cycles of reflection and improvement (Mazzacato, Savage and Brommels, 2010). However, standardising process can create problems. Sometimes staff do not see the new processes and routines as being 'fit for purpose' (Radnor, 2010). In this case study, there was only superficial acceptance of the new patterns, routines and methods. The cynicism of the employees formed part of the change resistance. It seemed that the 'record keeping and quantity of work was taking precedence over the quality of work. Employees viewed pervious ways of working as less cumbersome than the new form filling and reports.

Although the discontent with the new lean system started on an individual level it should spread to others professional member of the group. The socialisation of resistance turned to organizational defences. E.g. was agreeing the public face of the project. It wasn't an open sharing of information. Staff learned what could be said and what shouldn't be said in record keeping or externally.

Record keeping is an integral part of medical care both for fiduciary reasons and for the clinical decision making process. Careful consideration is made to maintaining records on patients and patient data. This might be individual patient records or the large databases that contain information about patients with similar disease conditions.

Below are my musing in my field notes about how things had progressed with the Lean project. I express concern over the different stories that are told about how successful lean had been for the hospital and the patients. The data didn't seem to be objective and was highly variable.

Field notes

> *The 'lessons learned' session and '60 day report out' contained many claims that efficiencies had been made in ACS: designed and deployed a single standardised evidence based pro-forma, formally deployed an electronic discharge summary, increase number of patient receiving cardiac rehab as inpatients'. Standardisation in the Cath labs for start and end times in performing PCI procedures was part of the overall lean programme. Timings of each consultant are recorded for regulatory monitoring reasons but this data was also used to see if the consultants were as efficient as they could be. The Cath labs depend on the information from the 'pro forma' to decide whether to preform a PCI or not. In addition to that, the consultants needs to be as quick as possible with the procedure to get blood flow into the damaged heart. It is a complicated task to ensure that all the Cath lab beds are used to their fullest capacity without having patients waiting for a procedure. A kaizen week was used to concentrate on improving start and finish times.*

The project manager who had been shepherding the cause of the ACS pathway was assigned to another project. So she 'handed over' the responsibility of the group to one of the clinicians. A decision was promptly made that this meeting would no longer convene and any agenda items would be covered in the departmental meeting instead. The group was effectively disbanded. Although IT people and e-pathway group still met to continue to work on implementing the software. (As a subsequent note- in a follow up interview in 2015 to find out if they'd achieved their objectives. It was found that the e-pathway funding had been pulled and the group was back to using paper pro formas as much as they could). The BAU was considered an 'achievement by senior managers who declared a positive outcome and praised all the efforts of the individuals involved, praise was extended to an external meeting and presentation.

When you spoke to nurses they explained for them. The work hadn't changed. They did the same job in the same way as they always had. They perhaps changed the way they recorded things or what was officially sanctioned but essentially the day to day work remained the same.

5.6. Chapter Summary

The chapter set out illustrate the four aggregate dimensions: Discipline and Domination, Barriers (1) Organisational, Barriers (2) Employee Expectations and Integration of the Myths. Each aggregate dimension was explored for the relationship to organisational learning and organisational studies theories. Examples from the data for the themes that support and explain the aggregate dimension were given to illustrate the meanings of the dimensions.

I illustrated how over the course of the Lean project, Staff members became disillusioned with the Lena projects. I have used many different kinds of data to show the two different stories of lean. There was the perception of the Organisation and its rhetoric and there was the [perception of the employees.

6. Discussion

6.1 Introduction

This chapter aims to elucidate the findings and emergent themes from the two previous qualitative analysis chapters (Chapter 4 and Chapter 5) relating to the four research questions. There is some overlap in the ideas within the themes with respect to the research questions, therefore themes are mentioned more than once.

First, there is a brief introduction related to the literature review then follows a section for each the research questions. Under each research question there is a broader discussion of the concepts that were illustrated in chapter 4 and 5 of the findings. .

The central questions of this thesis concern how learning and in particular learning Lean is perceived by organisation members. In order to address these issues, three complementary practice-based conceptualisations of learning phenomena have been reviewed: Crossan's (1999) 4I framework (thesis sections 2.2.1. and 4.5.1), Lawrence's (2005) political enhancement to the 4i framework (thesis section 4.5.2) and general concepts of learning and lean methodologies (thesis sections 2.2, 2.4 and 2.5) (Huber, 1991; Fiol & Lyles, 2005; Argyris & Schon, 1978; Flinchbaugh, 2008, Ferlie, xxx). The research question focussed on learning in the context of healthcare organisations during a period of lean implementation. It highlighted the issue of the institutionalisation of learning and embedding learning in routines. It also uncovered barriers to learning from the organisational and individual influences. In addition, the two case studies illustrated weaknesses in the using Lean Methodology in the learning process in changing hospital procedures.

Within this empirically-based theoretical approach, previous research has suggested that there are organisational barriers of managerial and system control: missing the link between knowledge and organisational goal (Popper and Lipshitz, 2000; Zell, 2001; Friedman et al , 2003), hidden values and hidden agendas (Sun & Scott, 2005), manager's desires to retain a positive self-image (Weick, 1995), rigid beliefs and assumptions made by consultants (Beer et al, 2005; Elliot et al, 2000), resource allocation (Beer et al, 2005), lack of consistent norms in the systems (Huzzard and Osteregten, 2002), (Rashman Withers and Hartley, 2009; Schilling and Kluge, 2009) as well as individual level barriers to learning from lack of know-how, mixed messages (Cannon and Edmondson, 2001), restrictive information from management (Cannon & Edmondson, 2001).

6.2 Individual Learning Experiences during the Implementation of Lean (RQ1)

How do individuals, in general, experience *learning* in a healthcare organisation that is introducing *Lean processes and methodology*?

The case study organisations in this thesis were undergoing a period of organisational change through learning and instituting new routines under Lean methodology. This set up a unique set of circumstances under which it was possible to review both organisational learning and lean implementation. The first question in this thesis is concerned with how individual experiences influence learning and in particular how it is experienced during lean methodology.

6.2.1 Individual perception of Learning

Individual learning is considered have taken place if there is a permanent change in behaviour, cognition or beliefs (Argyris and Schon, 1978). At an operational level, when individuals describe their experience; they describe a difference in their Knowing-how and knowing-why (Nonaka et al, 1994; Nonaka, 2009). As new knowledge and behaviours are assimilated, individuals changed their mental models.

In Case Study one, individuals distanced themselves from the new routines that were implemented by Lean transformation. They started talking about lean and it accompanying programmes in the third person. This allowed employees to disconnect psychologically (Argyris and Schon, 1978) from the principles introduced by Lean. The perception of the individuals was that lean was obstructive at worst, and a mild annoyance at best.

In Case Study Two, the empirical evidence showed individuals going beyond distancing to actually withholding knowledge and information that could have been shared in the group. The employee turned 'silent' (Blackman and Sadler-Smith, 2009). The perception of learning lean was to learning as little as possible to be able to just continue doing your job in the best way you knew how.

6.2.2. Employee Expectations and Barriers to Learning

Learning Barriers experienced by employees

Organisational learning occurs when employees engage with problems (Argyris & Schon, 1996). When the solutions to these difficulties are then embedded into the organisation's processes, it becomes part of the whole organisation's learning (Glynn et al, 1992). However, in both the case study organisations, there were obstacles to embedding the learning. In Case Study One, the learning was fragmented into small pockets of excellence. On the whole, staff felt fatigued by the all the changes. Staff saw discrepancies in how Lean was applied and lost faith in its value. Learning was not shared amongst all of the teams and there was resistance to adhering to Lean methods over current customs. In case study two, there were multiple stresses placed on learning, from multiple levels within the organisation.

Organisational barriers, Situated learning and knowledge sharing

In keeping with the view of Situated Learning (Lave and Wenger 1991), knowledge is constructed through social groups within an organisation. This was illustrated in the way clinicians shared their ideas about cardiac patient procedures but also in the way they shared their experiences of using new lean methods. They were engaging in the 'practice' of assessing whether these new methods were working and what to discard and what to keep as a new method. It was into a 'bitch session' social group but purposeful thought and identification as a group was taking place (Gherardi, Nicolini 2000). In case study Two there was evidence of the breakdown of the managerial accounts of the way work should be performed (Brown and Duguid 1991). Innovation was generated by the clinicians within the Rapid change projects and Integrated Care pathways.

Employee created narrative (subversive narrative)

The impact of Narratives in organisation are well documented (Gabriel, 2000; Brown and Duguid, 2001).Likewise, creating stories to affect strategic change is not new to the literature (Sonenshein,

2010; Barker and Gower 2010). In case study One, the participants, told stories about a variety things both personal and professional. In that group, the stories created cohesion through narrative which is best described as subversive. It was subversive in the sense that comments and stories were constructing meaning against Lean. The clinicians were creating a narrative to suggest that their clinical knowledge was superior to the suggestion made by senior management and the CG. The 'narrative' was lean was a separate issue to the practice of medicine. Lean was about paperwork (see Nurses comment in data analysis about filling out forms). Clinicians and clinical support workers ascribed to the notion that their patient care was entirely separate from any bureaucratic process which had to be endured. Still, knowledge about how to achieve the management standard was shred amongst nurses and SHOs, registrars and clinical support workers.

Knowledge sharing

Created their own created communities of practice – All three components of Knowledge sharing; people, process and technology (Garfield 2006) were evident in Case Study two. The people component consisted of the clinicians attempting to improve their daily practice. The Process element was the establishment of new routines by using Lean Methods. More specifically by sharing approaches through the Lean exercises of value stream mapping and process review. The technology element of the new software programme to identify cardiac patients was a shared approach from service improvement department, the cardiology department and software company. Each group had specific knowledge for their area of expertise and shared their idea for shaping a new environment for the hospital. Knowledge sharing was crucial for success in this venture for the hospital (Herremans & Issac, 2007).

Created narratives by the organisation

Narratives and storytelling have always been part of organisations (Gabriel, 2000). Narratives are intertwined with political agenda, the organisation's identity and groups within the organisation. Snowden (2001) suggests that stories are a powerful tool in organisations to be a convincing ay to communicate to employees. In the Launch day for the organisation in Case Two, Success stories were told about the use of Lean. Other hospitals' programmes were given as examples of success from an 'expert' in the field. The stories were emotive and inspirational (Gabriel 2000;) filled with anecdotal patient feedback (Allan, Fairtlough and JHeinzen, 2002) encouraging people to feel positive about lean. In Case Study One, the learning cohort was actively recording anecdotes in their learning journals through the lean process to create positive Lean stories. The organisation manipulating the environment so that learning Lean would be viewed as uplifting and part of 'good' efficient workforces.

Promoting fantasy rather than truth

Most notably, in Case Study Two, the hospital uses the story promotion as 'currency' (Boje, 1991) to indoctrinate employees to the idea of a successful Lean hospital. The learning of lean creates a whole new stream of decision making. The organisation was hoping that the Promotion of the idea of lean would lead to 'enacting' (Pentland 1999) of lean methods. This was not ultimately what transpired in either of the case study organisations but instead result in a kind of aimless learning. The Case Study two organisation, that is to say senior managers, continued to promote lean as a 'system panacea' to devote energy.

6.3 Perceived Process of Learning (RQ2)

How do employees experiencing Lean Implementation perceive the *process of learning* as it gets embedded into the organisation and into the individual work routines in this type of organisation?

The first research question focussed on the issues concerning learning in general using Lean processes. This part of the research highlights learning lean methods in healthcare and the process of learning itself. Specifically how does the process of feedback and challenge and the application of the lean programmes affect the process of learning. This is more specific to the workflow in the organisation. This aspect of the research delves into how the individuals involved in learning the new practices perceived their outcomes, their learning and their new ways of working.

Organizational learning has been mapped in many different ways: linearly as the acquisition of information becomes part of knowledge, Huber 1991); learning becomes part of new actions through understanding of organisational principles (Fiol-Lyles, 1985); in recurring loops as problem solving becomes more intricate (Argyris & Schon), cyclical and multileveled (Crossan). These different aspects of learning all lead toward the organisation using new knowledge or behaviours or actions to change is own processes in some way. In the two case studies presented in this thesis. The project managers attempted to establish new ways of practicing medicine. Procedures and process were modified to include new paperwork or electronic systems. However, the employees who needed to enact such change or learning did not actually learn to embrace the new procedures.

Institutional level learning has concentrated the systemic approach to the formal and informal process that enable an organisation to transform knowledge intro learning (Crossan, Huber, Fiol Lyles). Learning should increase when there is support from management or it is seen as an 'edict from above'. Even though there was an edict from management, that there should be new procedures, the employees id their best to ignore it.

Learning as it progress across the organisation:

Learning in organisations often occurs so naturally that it is difficult to take account how it has happened until after the learned has taken place. Changes in procedures or natural 'work-arounds' become routine within an organisation. Problems are solved and then the solutions shared amongst employees so that a new procedure or process is created. These ideas get embedded into the organisation as part of organisational memory (Wagner, 2003); or organisation routines, (Watkins and Marsick , 1992; Feldman and Pentland, 2003). Much of the previous research on organisational learning has concentrated on learning success or failure in terms of outcomes or barriers. Instead, the two case studies presented in this thesis have explored the different perspectives on the process of learning. The goal to uncover how individuals have experienced the process of learning and how they've described what they believe was learned. These two studies have given some insight into the barriers for learning in Healthcare organisations. Using Crossan, Lane and White's (1999) framework to help describe how staff was experiencing learning a new way of working. Crossan (1999) envisioned a "sequence and a progression to these processes at different levels" (Crossan et al 1999, p 525) but did concede that not all processes would be experienced at all levels. The two studies revealed some processes are skipped altogether and this changes the way the learning gets embedded. Indeed, it also changes what is learned, who learned it and the final result of the learning. Other researchers have also commented on how this process is fragmented (Shilling and Kluge, 2009, Jones and Macpherson, 2006). The intersection of individual, group and institutional learning has learning flowing from one level to the next and also flowing from individuals to groups

and back again by means of feedback. Feedback needs to be studied more closely as we found in these studies.

Feedback can perpetuate propaganda information that seemingly represents real time data coercing an individual or group to change actions or behaviours. The absence of feedback focuses our attention to the way in which individuals will fill the void with information they've gathered or information from their peers. This information is not necessarily accurate or helpful to learning and change. (Argyris, 2000: Davies and Nutley, 2000, Crossan et al, 1999: Crossan and Bedrow, 2003; Sterman, 2001).

In Crossan's 1999 article, they proposed that the way in which learning moved across an organisation from level to the next was related to the feed forward and feedback processes. Many other researchers in this area have expressed same notion that ideas are shared amongst colleagues and new actions taken (Daft and Weick, 1984; Huber, 1991). Earlier models of learning included single and double loop learning (Argyris and Schon, 1976, Argyris, 1985). These were valuable contributions to understand processes behind why an individual might adopt a new strategy once having experienced learning. Single loop learning highlighted a straightforward linear approach to learning that did not require much feedback.

Internal cognitive mechanisms form understanding of new information that needs to be learned within the organisation. Feedback is an essential part of the learning and the employee experience. Analysing failure can help learning if there is an opportunity for safe reflective learning. Lack of feedback leads to resentment and assumptions on the part of employees. Not wanting to appear incorrect leads to suppression of challenge and creative ideas (Askew and Lodge, 2000; Davies and Nutley, 2000; Nystrom and Starbuck 2015).

The feed forward and feedback process in both Case Study One and Case Study Two were absent. The poor administrator in case Study Two does not know where to turn with her problems and decided to leave the organisation altogether. Thus this is organisational knowledge lost because the strain of the Lean implementation puts on learning.

6.3.1. Absence of Feedback

The principles and goals of learning and lean have some important commonalities especially in a medical setting. Lean embraces the ideals of continuous improvement and feedback into systems just as organisational learning promotes reflexive learning through feedback. Moreover Lean and organisational learning share the principles of improved competiveness (Dodgson, 1993) and integrating and institutionalising learning in teams (Crossan et al, 1999, 2009; Flinchbaugh, 2008). The goal of lean in healthcare had been to develop a shared understating amongst healthcare professionals how to improve medical practices and procedures. When process is stable and efficient, it is easier to detect deviations in patient outcomes. Lean impacts work practice and the culture of the organisation. In the ideal state, lean should be able to provide a platform for continuously improvement in an organisation. Lean principles use the same scientific principles to diagnose and treat organisational issues as the medical profession uses to diagnose and treat patients.

6.3.2 Failure of Feedback Loops

Feedback loops:

Beyond levels of learning, this research also touched on the different types of learning and the feedback loops that help employees to understand learning through problem solving. Single-loop and double-loop learning (Argyris & Shon, 1978) provide some explanation of what occurs when an employee especially a clinical employee gains feedback from the result of an action with a patient. In Site 1, learning from feedback occurred as part of the training course 'leadership Academy'. Participants reported in their learning journals that they had gained knowledge from conversation with staff or patients about the results of a medical examination or procedure. Single loop learning came in the form of a break down in a process that was fixed more often than not with a work around. It was difficult to unearth examples of double loop learning. Perhaps the examples of the software programmes being changed in several iterations was something akin to double loop learning.

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Double loop learning refer to more complex problem solving and method of embedding new learning into an individuals' every day work strategy. In our studies feedback was interrupted by reasons mentioned previously: political control by managers, hoarding of information, perpetuation of the organisational myths and silencing of employee voice. There was an absence of meaningful feedback in the projects that hindered the opportunities for learning.

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6.3.3. System control

Lean is often presented as a system in which the focus is on targets as was illustrated by the emphasis on outcome driven measures such as length of stay and using ACS Pro Forma documentation to track a patient's recovery. This results in recorded improvement of statistics but didn't necessarily reflect changes in behaviour or change to a clinician's ways of working.

There was a lack of focus on people in the implementation (Stanton et al, 2014). This help to identify the challenges in trying to implement lean by a forced compliance. It not only had an impact on how Lean was implemented by the whether learning was fully embedded into daily routine. In order to be able to implement Lean as it was envisioned (Dickson et al, 2009) as a part of business process reengineering (Womack and Jones, 2014), there is a need to consider the people element. Furthermore, a further adaption to the way Lean is helpful to healthcare systems is also necessary

(Radnor et al, 2012). The alignment to clinical staff and the organisational culture of healthcare would prove beneficial to lean implementation (Bishop and Waring, 2010).

At both HealthCo and St. Lydda's, executives often spoke of 'systems thinking' as a problem solving method for including individual practices into the whole realm of healthcare system practices. Analysis tools of the systems like Lean methodology are applied to reduce waiting times, improve screening practices to diagnose patients and access available resources in a public healthcare system. A systems thinking approach should create interdependent pathways among health professionals to have coordinated care for the patient. However, the empirical data from case studies shows us that often the system is used as a measure of control.

This paradox of systems thinking is that the tools which the clinical team have at their disposal to diagnose are determined by a bureaucratic system designed for machines not people (Shortell and Singer, 2008). The organisational infrastructure influences the successful delivery of healthcare through systems thinking both positively and negatively. For example, the infrastructure can include software to track patients as was seen in the case study at St. Lydda's. the SVOT software system to track patients had very little impact on the daily routine of the clinicians at St. Lydda's. In some ways, the onerous task of filling in the forms on a software system hindered the clinical decision making process by taking the clinician away from the physical location of the patient. The new system of tracking patients proved to be more a form of control over how much work was recorded by clinicians rather than how much work was actually getting done.

6.3.4. Managerial control

In bureaucratic models of management, defensive organisational behaviours surface. The uncertainty of changing to a new system can result in rigid and controlling behaviour. This leads to difficulties for in establishing linkages between the learning of individuals and groups. Since the dynamic model of Lean is to provide stability by reducing the complexity of systems, it is possible to suggest that the aim is to be more controlling as a mechanistic part of management. This is counter to the espoused aim of individual discovery and introduction of feedback mechanism so that the individual might be able to affect the outcome of a Lean project. Despite the notion of empowering clinicians and team members to learn from all members of the organisation.

Managerial control seemed to inhibit the ability of staff to intuit or interpret contrary to suggestions in previous research (Lawrence et al, 2005). Influence and force did not encourage individuals. Instead they hoarded information and built barriers to sharing across levels to project leaders and to colleague. (Haldin-Herrgard 2000; Holste and Field 2010).

Managerial control and ownership of knowledge were frequently mentioned as a barrier to learning. Manager put up barriers to learning, in every stage of learning Shilling and Kluge, 2009) but particularly in integration where shared knowledge is an essential component. Silenced employees (Blackman and Sadler-Smith, 2009) did not share information with colleagues or with the project managers. No further learning could take place within the organisation. The learning that was eventually institutionalised was a diluted version of the original plan. Employees withdrew from the politically motivated process. Initial attempts were made to contribute to discussion about the project but were soon silenced. A conscious effort on the part of nurses, HCAs and Admin to withhold their opinions was evident (Blackman and Sadler-Smith, 2009). Tacit knowledge was certainly lost to this void in information sharing. Future projects would not be able to benefit from

experiential learning because there was not mechanism for silenced employees to share their explicit or tacit knowledge of ways of working.

In both case studies, Learning was inhibited by managers who used Lean to control the activities of their staff. They controlled the learning that might have taken place if information had flown freely from individual to group to organisation level. Sharing ideas between team ideas was not encouraged. The more junior members of staff did not experience the ideas in the same way. Ideas were presented to them in a truncated form. Each ward or department still had their own way of doing things even though lean was supposed to eradicate this practice.

6.4 How Learning Moves and is Embedded in Routines (RQ3)

How is learning perceived to *move* across the healthcare organisation from individual to the group and then embedded into the organisation especially during the implementation of Lean?

This question concerned not just what was learned but how it moved across the organisation from person to person and group to group. Within the disciplines of both Lean and Organisational learning, there are tenets of knowledge acquisition and sharing knowledge or know –how that in principle would make it beneficial to both organisation members and the organisation itself to share feedback and learning from all aspects of work. In this section, I discuss how individuals in the two case study organisation perceived learning to move across the organisation whilst it was undergoing a learn transformation.

The models of both Lean and Learning in organisations conclude with the goal of having acquired new procedure or knowledge acquisition for the purpose of the organisation's competitive advantage.

Lean literature describes the 'movement' of lean as having levels of: tools, patterns, systemic structures, and mental models (Flinchbaugh, 2008). Lean is focussed on reviewing and revising routines and work methods. Lean 'moves' through an organisation in the observation of how individual work is completed.

Organisational learning research describes 'movement' from individual level to group level to organisational level. This literature has been concerned with the assimilation of learning and then how it spread across different groups in the organisation.

6.4.1. Learning from Individual to Group

Learning moves from the individual to the group when shared knowledge is accomplished (Yang,2007; Crossan et al, 1999, 2009). The problem with transferring knowledge form one person to another is that it requires mutual trust and a atmosphere of safety in the organisation (Carroll and Edmondson, 2002). One of Crossan's 91999) fundamental ideas was the knowledge would pass from individual to group to eventually be embedded into organisational routines. Insights are made from the interpreting process that are then shared in the integrating process. Individuals discuss new idea with others by actively building a shared understanding (Senge, 1990; Nonaka and Takeuchi, 1995).

However, what happens, as in the case of St. Lydda's in case study two, when the knowledge gets embedded into the routine is a very superficial version of what was intended by the organisation. The empirical evidence in chapter 5 illustrated that the clinicians at St. Lydda's did 'what they

needed to do' in order just to get along with the system. The individual interpretations of lean implementation diluted what was transferred into the routines.

6.4.2. Organisational processes

In the context of the two case studies, I am using processes to express forms of organisational decision making (Mazzacatto, Savage and Brommels, 2010; Pettigrew, 2014). It was starkly clear in case study two that organisational processes were influenced by the management consultant s from CG. This was a very political process whereby senior ex4ecutives in the hospital used information provided by the consultant to make decision (see Findings chapter 5 section 5.3.1 and 5.5.1). As reported in the Findings sections, the consultants put forward their case for trialling specific rapid change projects based on their own data. The 'bubble chart' and the tariff data (pages 103-106) were concocted by the consultants to persuade the senior executives.

Lawrence et al (2005) described the strategy of influence and control in organisation as providing a force to encourage individuals and groups to learn. In Case Study Study Two, processes were being controlled by external consultants. Lawrence (2001, 2005) called this 'legitimate interpretation' of new information. Forming a discipline around new ways of working should give a 'legitimacy to an interpretation of information within the organisation' (Lawrence et al, 2005). This idea of legitimacy is intriguing to be used in this way. Other management research has used legitimacy to describe organisational performance (Levitt and March, 1991) and its effect on the positive or negative impact on institutionalisation (Weiwel and Hunter 1985). The dynamic factor is the rejecting or accepting of an idea due in part to the effects of feedback and the 'concern for legitimacy' (Levitt and March, 1991, p 331).However if we borrow form this idea of success. Legitimacy can take on anther meaning. In my studies, ideas were deemed legitimate or not by who proposed them. The general rule was that if a project manager proposed an idea then it was legitimate but if just a project member proposed it, the idea may nor may not have been officially accepted.

Legitimacy can be defined as a "a perception or assumption that the actions of an entity are appropriate within a socially constructed system of values and beliefs…legitimacy depends on the type and strength of values and beliefs developed by interrelated surrounding actors towards an actor." (Hadjikhani, Lee, & Ghauri, 2008: 914), legitimacy is a seminal construct to account within business research (Kostova & Zaheer, 1999). If an idea lacks legitimacy, it may be rejected by the group (Sahaym, 2013) or can succumb to an identity crisis motivated by external entities (Rodrigues & Child, 2008). Groups or projects with high legitimacy have been found to generate positive outcomes such, sustainability within the longer organisational change programmes (Bianchi & Ostale, 2006).

Legitimacy research traditionally applies to whole organisations to reveal how firms justify their existence to external entities, such as other firms and the marketplace (Kumar & Das, 2007). In this context though, it is useful to examine whether the idea of Lean as positioned by the Consulting Group were accepted as legitimate (Clark and Salaman 1996; Fincham, 1999; Czarniawska and Mazza, 2003., Sturdy, 2004). The acceptance depended on your status within the organisation. The more senior clinical staff and the management executives accepted CG's ideas and version of events. CG created an image of themselves as experts in this field (Gill, 2013; Martin, 1978; Massey and Walker, 1999).

The idea emerged that management consultants legitimised the forms of data used to make decision and which procedures and protocols would be put forward to be part of a the Lean transformation.

The clinician's ideas about their forms of work were not considered as legitimate as the external management consultants.

6.5 Organisational Influence of Lean Implementation on Learning (RQ4)

How do employees experiencing Lean Implementation describe the aspects of *influences of the organisation* that affect learning which will eventually be embedded into practices?

The question considers how lean was hailed as a solution to the problems within the two case studies. The message given by senior executives in the case study organisations was Lena would serve as tool, technique and overarching philosophy to guide in the actions of organisation members.

The promise of lean was to develop the capabilities of 'front-line' workers. Their dialogue and feedback about the way work should be organised was to bring continuous improvement to healthcare. Teams can learn from mistakes and create stable processes after a period of reflective thinking. Problem-solving skills learned through daily practice and sharing knowledge.

The early articles on lean stressed the importance of people in the lean process (Monden, 1983). The human dimensions of motivation, respect for people is seen as crucial (Hines, 2013). In recent healthcare endeavours, including both of the case studies in this research, the criticism of lean can levied against whether the role of individual in a work context is appropriately given. The empirical evidence in case study two illustrated clinical roles as being Sid lined for senior executives to make decagons about procedures and programme strategy. Clinicians were not seen as 'competent' to make decisions about the future of procedures and what to include in the lean transformation (Petersen, 2009). There are areas of conflict where people are concerned. Their own knowledge of work processes in not necessarily considered (Pettersen, 2009).

This study has uncovered a multitude of factors in differing pathways that affecting learning including: organisational change, culture, storytelling, management fads, influence of management consultants and employee expectations as reported in chapters 4 and 5 of the findings section.

Progress was episodic and wasn't sustained in the long term. Most improvements reverted back to the current state before lean had been implemented. The Management Consultants influenced the implementation of their version of improvements but as soon as they left, the transformation was discarded. The idea of lean was to create more time for clinicians to be freed of administrative burdens or activities that wasted time. Changes were made so that medical professionals could make use of all of their knowledge. Removing duplication of work and effort should have given more time to patients and cooperative work amongst professionals. However, the examples and illustrations form the case studies show that Lean provided a structure which was not helpful to learning.

6.5.1. Influence of Lean on Learning

For all its positivistic measurement, Lean was subjected to the same kind of politicised manoeuvring as any other kind of learning or change programme.

The variation in application of lean methods contributes to the barriers to learning among group members and the organisation. This translates into localised practise at the institutional level.

Many articles have explored the adoption of Lean for the public sector (Radnor et al, 2006; Radnor and Walley, 2006; Bagley and Lewis , 2008, Radnor, 2010). There have been various articles published on the adoption of Lean in Healthcare across the globe but many of these articles concentre on the process of operational benefits that Lean derives , and many concentrates on specific department or wards (Ben-Tovim, et al, 2007; Dickson et al, 2009; Meyer, 2010; Holden, 2011). Many case studies on Lean report the early stage so implementation and as such do not offer a longitudinal view of lean in Healthcare.

The literature on Lean in Healthcare covers a variety of types of organisation and implementation uses. Many of the examples form previous are form the US with differences in how procedures are applied because of the type of healthcare organisation public or private, insurance funded or as a 'closed system'. Previous research highlights the operational and process improvements but lacks significant detail in the affect on employees on which Lean was imposed. Early articles tended to report positive Lean outcomes (Ben-Tovim, et al 2008; Fillingham, 2007, Graban, 2009; Dickson et al, 2009). However, the more recent articles begin to link the obstacles to full implementation and learning (Grove et al, 2010; Waring and Bishop, 2010; Radnor et al, 2012).

This places the focus of lean as a learning activity in order to improve processes, the organisation has to promote improvement in work practices and self improvement (Balle and Regneir, 2007; Ben-Tovim, et al 2008, Toiussant, 2009, Touissaint, 2013).

Ability to Interpret information Organisations are influenced by the external pressures of their environment. Healthcare organisations are under extreme pressure to adopt Lean methods by the politics of guiding think-tanks such as the IHI who introduced lean. Research site 1 was heavily influenced by the idea of Don Beriwck and Atul Gawande to introduce lean principles to improve patient care. Study two, St Lydda's, had experts from the field presenting good cases from other hospitals that had already improved care. St. Lydda's also had a highly respected Consulting Group (CG) that also reported on success in other hospitals. This gave the impression of St. Lydda's falling behind if they did not use Lean as tool for changing the processes within the institution. The Consultant's knowledge and experience was interpreted as the superior way of conducting the practice of medicine. This highlights the lack of focus on the people aspect of Lean implementations (Stone, 2012; Taylor et al, 2013)

Then the power of the Consulting group influence and leverage within the healthcare sector and the hospital present another form of power (Fincham, 1999; Czarniawska, and Mazza, 2003).The two studies conducted in healthcare organisations revealed an uneven and unpredictable distribution of knowledge about projects and new ways of working.

6.5.2 Employee Perception of Organisational Influence

Employees describes barriers of learning in their experience of learning Lean. There was a mismatch between what employee anticipated or hoped would happen in the lean programmes to the actual outcome of events. Employees were often disappointed by the way they were treated by managers.

Employees withdrew from the politically motivated process. After initial attempts to contribute to the lean programmes, employee felt silenced by the absence of feedback. After that, clicnal staff made a deliberate effort to withhold their opinions (Blackman and Sadler-Smith, 2009). Tacit knowledge was certainly lost to this void in information sharing. Future projects would not be able

to benefit from experiential learning because there was not mechanism for silenced employees to share their explicit or tacit knowledge of ways of working.

The expectation of employees can be explained by Hopkins (2002) concept of reciprocity. There was no perceived reciprocity from the absence of feedback and therefore individuals withheld the kind of linked to organisational citizenship behaviour and effort (Somech, Drach-Zahaay, 2004). Behaviour that exceeds the job requirements are crucial to organisational change programme's success (Brief and Motowildo, 1986; Katz and Kahn, 1966).

The structural affect of lean as an organisational mechanisms did not provide the desired effect of institutionalising procedural arrangements (Popper and Lipshitz, 2000).

6.6. Chapter Summary

This chapter discussed the theoretical underpinning relating to the four research questions: individual perception of learning experiences during lean implementation, the perceived learning process with its feedback loops. It considered the perceived process of learning and the impact of absence of feedback. It covered the aspects of managerial and system control. The chapter then further discussed how learning moves from individual to group and final organisational influences of Lena. The chapter highlighted the mismatch between the employee perception and the organisational constraints of implementing Lean.

7. Conclusion

7.1 Introduction

The conclusion to this research study is presented in this chapter. The aim of the chapter is to provide a summary theoretical and practical contributions to organisational learning literature and research in Lean Methodology. The contribution to knowledge form this thesis will be articulated. The limitation of the research will be considered and recommendation for further research will be presented.

7.2. Contributions

This study makes a contribution to scholarship concerning organisational learning and implementation of Lean methodology in a healthcare setting. My primary contribution adds to the understanding of how learning is embedded into an organisation and what barriers may exist to prevent learning from being embedded. The barriers are many fold and arise out of different theoretical areas of research. Some of the barriers can be explained by resistance to change while others.

I make further empirical contributions to the field of Healthcare Research as an in-depth study of how clinicians perceive the implementation of Lean in an organisation. The context provides a critical view of the challenges in healthcare setting for organisational change through Lean transformation and for learning.

The thesis offers general practical insights into the methodological tool of Participant Observation. The prolonged effort of maintaining contact with the second case study organisation offered many insights that would not have ordinarily been available. The in-depth engagement with participants and organisational materials meant that were was a natural triangulation of data and a rich understating of the true leaning in the organisation. If had only interviewed participants in the lean implementation, I may have come to a different conclusion of the success of the programme. If I had only looked at corporate archival documents, I may have reached a slightly different conclusion.

7.2.1. Theoretical contributions

My theoretical contribution to the literature

One area of and level of learning affects another. The final result being the erratic or purposeless learning, which I have called ‘Aimless learning’. This new construct of Aimless learning is not an absence of learning but a display of learning when no change in cognition or behaviour has taken place. The goal of individual learning is to develop a new mental model for use in future decision making. We assimilate knowledge for future decision making models. The empirical evidence from

both case studies leads us to the conclusion that it is possible for individuals to learn something with no purpose whatsoever.

In case Study One, I used the terms unintended learning and arrested learning. I was trying to describe how the learning when forced by Lean Methods has been turned into something other than was intended originally. However, it didn't encompass the full meaning of what I was trying to convey.

My argument is that it is important to understand how learning transcends from individual to group to organisational level. Clearly, sometimes there are missing steps in the process and individuals do not have the opportunity to fully assimilate what should be learned or indeed the learning intended by the organisation. In addition, there is a void of information when feedback loops are interrupted or when the loops are non existent. The process by which individual fills this void with their own interpretation and localised practice is the key to what's finally embedded in the organisation.

When Learning was 'leaned', aimless learning was achieved. At face value similar to surface learning, employees described using new forms and following new protocols but the fundamental way they treated patients was not changed. Their behaviour did not change, their cognitive understanding of patient care did not change.

Socialization meant supressing information it turned to organizational defences. Interpreting the information with others was agreeing the public face of the project. It wasn't an open sharing of information. Staff learned what could be said and what shouldn't be said in record keeping or externally. Record keeping is an integral part of medical care both for fiduciary reasons and for the clinical decision making process. Careful consideration is made to maintaining records on patients and patient data. This might be individual patient records or the large databases that contain information about patients with similar disease conditions. The 'lessons learned' session and '60 day report out' contained many claims that efficiencies had been made in ACS but it the success of recording and reporting. Daily work practices had not changed. Recording it as a success when there isn't a clear improvement. There is some improvement but even in the 60-90 day period we see the 'slipping back' into old habits. .

Although using lean to standardise practices was the goal, Each RCP and ICP was run by its own clinical director. They used the lean method to introduce their own methods and discarded anything that was difficult. They also discarded practices that took too long to see a benefit. They strategy of long term change was lost in favour immediate gains to their own agenda.

Patients were always getting good care but not necessarily the most efficient care or at the least cost. The paediatric project for lean instituted long held plans by the chief clinician. St Lydda's used lean to implement a plan that had already devised. There was never an opportunity for staff to feedback how they saw the project or if they believed it was beneficial to patient care.

If you asked any of the ward clerks, nurses, or admin staff what was 'learned' through the lean project it was things like: 'capturing info', 'playing the game', 'just doing it' without understanding why, 'record what needs to be 'recorded', doing it the manager's way', 'the ward way', the CG way', 'Doing part of the process to 'show it's being done', 'Information gets left out that is not convenient to the organisation'. Aimless Learning was could also be described as a breakdown of learning.

What was institutionalised was the habit of non-learning. People actively tried not to learn what was offered by the consultants. If they did admit to learning, it was a kind of aimless learning. A way to appear to have a learned a new way of doing things.

They had a new way of filling out forms but this had nothing to do with the way they practised medicine or nursed at the bedside. It had everything to do with appearing as though they were complying.

The phenomenon of Aimless Learning is simultaneously passive and active. The learner actively appears to engage in the busyness of learning but passively rejects any new ideas. It is different form surface learning because there isn't any learning of new ideas. It could possibly be an additional outcome of emotional labour hiding the fact that the daily work is not completed differently but appearing to have changed.

The research study set out to explore how learning took place and was embedded in a healthcare organisation. As was mentioned before, it did not set out to prove or disprove whether the Mary Crossan's 1999 4I framework was correct in its assumptions. It has merely used the Crossan framework to help describe the phenomenon observed in these studies. However, the current studies were broader than just the 4I framework and explored the experiences, perceptions and beliefs about learning Lean methodology within an NHS change programme.

Having already established that there is a body of knowledge on the barriers to learning, the critical and new element that these studies bring to the literature is the idea of Aimless learning. A kind of learning that has no immediate purpose to the individual or the organisation. This chapter briefly summaries the key findings in relation out the literature on both Organisational Learning and Lean methodology.

As was seen in the discussion of empirical evidence, meaningful learning was prevented because staff felt they had been left out of the feedback loops. The use of control over information by managers is an example of how power and politics can be a detriment to learning (Rashman and Hartley, 2006, Schilling and Kluge, 2009; Bunderson and Reagans, 2011, Vince and Saleem, 2004; Vince 2001).

Organisational dysfluency

I have coined this term to represent the specific way in which organisation use storytelling to create very specific message. Propaganda isn't quite the right word for it and it isn't outright lying. The truth statements are carefully set side by side in order to produce what seems to be a true story.

Statements juxtaposed can create a success nararitve of Lean or any other organisational constructs. Statements can be essentially true for a specific instance but not necessarily the whole story. Corporate media fashions *one* case of success into the *ubiquitous* case of success.

Speech and linguistic researchers use the term disfluency to describe interruptions in speech (Yu, Castel and Bjork, 2012). I have applied this idea to the theories of organisational narrative (Gabriel, 2000). Future studies could undertake content and/or discourse analysis to review speech patterns in corporate messages.

7.2.2. Practical contributions

Embedding learning from new ways of working

This study addresses these issues in understanding the difficulties and the successes for employees in learning new ways of working through Lean methodology in a large healthcare organisation. The research extends our understanding of the Organisational learning overall and 4I framework by providing further empirical support and deeper examination of its complexities. It also extends previous work on learning in healthcare. It has practical implications for training and learning in organisations.

Organisations consume millions of pounds in adopting new policies and procedures and training individuals to perform new routines. The healthcare sector is under increasing scrutiny to save money, improve efficiency and safety (Rivard, Rosen and Carroll, 2006) and, as a consequence, learning is seen as a 'central theme for the NHS' (Nutley and Davies, 2001, p 36). As a result of their size and complexity, healthcare organisations depend on systems, repetition and routines to aid in and reinforce learning (Gawande, 2009; Edmondson, 2002; Stan and Vermeulen, 2012). However, such standardisation has not been effective in addressing complex and persistent organisational problems and issues.

Organisations need to address the concerns of aimless learning otherwise they will spend millions of pound on teaching a new concept for no reason at all. Nothing will be achieved if Employees turn away from the learning and embrace 'aimless learning'.

Two Case studies: One Thesis

I included two separate case studies in this thesis. The second being much larger and more complex than the first one. I took the decision to leave the explanation of case Study One as it had been written up for a conference paper. The reason for including the conference paper in chapter 5 was to show how my thinking broadened from the write up of Case Study One to the investigation in Case Study Two. Case Study One focussed intensely on the 4I framework, putting each of the concepts into the 4 stages of Crossan's framework. However, from the discussion in my transfer viva, it was clear that I could widen the scope of my ideas and consider Organisational Learning theories in general. Thus, for case study two, I was open to any and all theories that might explain organisational learning and explain the phenomenon of the empirical data I gathered.

The case studies were researched sequentially and not for comparison but to deeper my understanding of the phenomenon uncovered. The thesis was also not a comparative design. I had similar themes in each of the case studies but I did not compare the themes from case one to case two. As Yin (2011) explains, I refined the research tactics and analytical framework. In Case study two, I paid closer attention to the surroundings of the organisation and gathered a greater variety of data types, e.g. I used photographs of organisational artefacts such as bulletin boards and project progress charts.

Research methodology: the benefits of prolonged engagement

Participation observation gives a unique insight into an organisation. In Case study two, I had sustained contact with the organisation for almost two years. The follow up opportunities that I had with members of the organisation helped me to understand all of its complexities. Participant observation offered the scope of rich data from many different sources. However this also proved a difficulty in deciding which parts of the data were most important to present and to analyse. The length of time in the institution provided incredible insight to the 'truth' of the process. If I had not

been with the institution for so long I would not have realised that no work habits had actually changed and would have been convinced by CG's view of the data. However, the sheer volume of data to discuss presented problems for this researcher. Future papers or publications of this data will need to be carefully organised so that the data can be fully discussed.

7.3 Limitations & Future Research

Participant Observation: How close is too close?

It is also important to note that prolonged engagement comes with challenges. The researcher can drift into being 'part of the team' and therefore perhaps the study almost becomes an ethnographic study in which the researcher must be ware of influencing the outcomes. Sometimes when writing up my field notes, memories would come floating to the surface. It was a difficult balance to maintain objectivity in the data analysis. Yet at the same time, I feel I know this research inside and out because I have lived it, experienced it and have been supressed by it.

Further research

Future research might concentrate on defining aimless Learning as an operational construct with the field organisational learning and lean methodology. In addition stronger links between lean methodology and its underpinning philosophies and OL should be explored. The descriptions of the two areas of research are so similar that it seems a natural synergy to develop them in combination. As healthcare organisations become increasingly enamoured of Lean, this will provide an opportunity to study how clinicians find the balance between from standardisation and variation. It would be helpful to know if patient outcome are improved by such methods with quantitative studies.

7.4 Final Words

The PhD time frame has not been without its major personal challenges. It was very difficult for me to complete given my circumstances, I was grateful for the opportunity to revise the thesis. I feel this is a much better representation and explanation of the research. |It is much more focussed. Admittedly, this version still very likely needs a few tweaks here and there, but on the whole it has all the elements that were required.

After the completion of the PhD, I hope to return to hospital work in a medical school. I would like to put my knowledge of Lean and learning to good use within medical schools. Sometimes, in a professional capacity, I run training sessions for physicians. This was partly the impetus for me to do a PhD to uncover why it is so difficult to get physicians to learn new things. My new found knowledge of hospitals and ways of working would be ideal to instruct new medical students before they learn bad habits.

References

Abrahamson, E., (1991) Managerial fads and fashions: The diffusion and rejection of innovations. Academy of management review, 16(3), pp.586-612.

Abrahamson, E., (1996) Management fashion. Academy of management review, 21(1), pp.254-285.

Abrahamson, E. Fairchild, G. (1999) Management Fashion: lifecycles, triggers and collective learning processes, Administrative Science Quarterly, 4, 708-740

Achanga, P., Shehab, E., Roy, R. and Nelder, G., 2006. Critical success factors for lean implementation within SMEs. *Journal of manufacturing technology management*, *17*(4), pp.460-471.

Akgun, A.E., Lynn, G.S., Byrne, J.C. (2003). A Sociological perspective, Human Relations, 56 (7), 829-868

Alaszewski, A., (2006) *Using diaries for social research*. Sage.

Alvesson, M., Kärreman, D., Sturdy, A. and Handley, K., 2009. Unpacking the client (s): constructions, positions and client–consultant dynamics. *Scandinavian Journal of Management*, *25*(3), pp.253-263.

Andersson, T., (2015) The medical leadership challenge in healthcare is an identity challenge. Leadership in Health Services, 28(2), pp.83-99.

Anderson-Levitt, K.M., (2011) World anthropologies of education. *A Companion to the Anthropology of Education*, pp.11-24.

Angrosino, M. and Rosenberg, J., (2011) Observations on observation. *The Sage handbook of qualitative research*, *4*, pp.467-478.

Annells, M. (1997) Grounded Theory Research method, part 1: within the five moments of qualitative research, Nursing Inquiry, 4 (2), 120 -129

Antonacopoolou,E.P. (2006) The relationship between Individual and Organizational Learning: New Evidence from Managerial Learning Practices, Management Learning, 37 (4), 455-473

Antonacopoulou, E.P. and Gabriel, Y., (2001). Emotion, learning and organizational change: Towards an integration of psychoanalytic and other perspectives. Journal of Organizational Change Management, 14(5), pp.435-451.

Apker, J., Propp, K.M. and Zabava Ford, W.S., 2005. Negotiating status and identity tensions in healthcare team interactions: An exploration of nurse role dialectics. Journal of Applied Communication Research, 33(2), pp.93-115.

Argyris, C, Schon, D (1978) Organizational Learning: A theory of Action Perspective, Reading, Massachusetts: Addiso, Wellsley

Argyris, C. (1977). Double loop learning in organizations. Harvard business review, 55(5), 115-125.

Argyris, C. (1990). Overcoming organizational defenses: Facilitating organizational learning. Allyn & Bacon.

Argyris, C., 1993. Knowledge for action: A guide to overcoming barriers to organizational change. Jossey-Bass Inc., Publishers, 350 Sansome Street, San Francisco, CA 94104.

Argyris, C., 2000. Double---Loop Learning. Wiley Encyclopedia of Management. Argyris, C. (2008). Teaching smart people how to learn. Boston, MA: Harvard Business Press.

Argote, L. and Ingram, P. (2000) Knowledge Transfer: A basis for competitive advantage firms, Organizational Behavior and Human Decision Processes, 82 (1), 150-169

Argote, L. (1993) Group and Organizational learning curves: Individual, System and Environmental Components, British Journal of Social Psychology, 32 (1), 31-51

Argote, L. (1999) Organizational learning, Creating, retaining and transferring knowledge, Norwell, MA: Kluwer Academic Publishers

Argote, L. (2011) Organisational Learning Research: Past, Present and Future, Management Learning, 42 (4), 439 -446

Argote, L. Miron-Spektor, E. (2011) Organizational Learning: From Experience to Knowledge, Organization Science, 22,(5),1123-1137

Armenakis, A.A. and Bedeian, A.G., 1999. Organizational change: A review of theory and research in the 1990s. *Journal of management*, *25*(3), pp.293-315.

Askew, S. and Lodge, C., 2000. Gifts, ping-pong and loops-linking feedback and learning. Feedback for learning, pp.1-17.

Attewell, P., 1992. Technology diffusion and organizational learning: The case of business computing. Organization science, 3(1), pp.1-19

Bailey, C., Mankin, D., Kelliher, C. and Garavan, T., 2018. *Strategic human resource management*. Oxford University Press.

Bapuji, H., Crossan, M.M. (2004) From Questions to answers: Reviewing organizational learning research, Management Learning, 35, pp 397-417

Barker, R.T. and Gower, K., 2010. Strategic application of storytelling in organizations: Toward effective communication in a diverse world. The Journal of Business Communication (1973), 47(3), pp.295-312.

Bartunek, J.M. and Seo M.G. (2002) 'Qualitative Research Can Add New Meanings to Quantitative Research', Journal of Organizational Behavior 23, (2), 237-242

Barson, R. J., Foster, G., Struck, T., Ratchev, S., Pawar, K., Weber, F., & Wunram,

Barson, R.J., Foster, G., Struck, T., Ratchev, S., Pawar, K., Weber, F. and Wunram, M., 2000, October. Inter-and intra-organisational barriers to sharing knowledge in the extended supply-chain. In *Proceedings of the eBusiness and eWork* (pp. 18-20).

Bartol, K.M. and Srivastava, A., 2002. Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies*, *9*(1), pp.64-76.

Bate, P. (2004). The role of stories and storytelling in organisational change efforts: a field study of an emerging "community of practice" within the UK National Health Service. Narrative research in health and illness, 325-348.

Bateson, G. and Mead, M., 1942. Balinese character: A photographic analysis. New York, pp.17-92.

Beattie IV, V., Collins, B. and Mcinnes, B., 1997. Deep and surface learning: a simple or simplistic dichotomy?. Accounting Education, 6(1), pp.1-12.

Becker, M, (2005) A Framework for Applying Organizational Routines in Empirical Research: Linking Antecedents, Characteristics and Performance Outcomes of Recurrent Interaction Patterns, Industrial and Corporate Change, 14, (5), 817- 846

Becker, M. Lazaeic, N, Nelson, R, Winter, S.G. (2005) Applying organisational routines in understanding organisational change Industrial and Corporate Change 14, 5, pp 775 - 791

Beeby, M., Simpson, R. (1998) Barriers, Boundaries and leaks in an organization and development intervention, Leadership and Organization Development Journal, 19 (7) 29-40

Beer, M., Eisenstadt, R.A. (2000) The silent killers of strategy implementation and learning. Sloan Management Review 41 (4), 29 -40

Benner, M. Tushman, M. (2002) Process Management and technological innovation: A longitudinal study of the photography and paint industries, Administrative Science Quarterly, 47, (4) 676-706

Benner M., Tushman, M. (2003) Exploitation, exploration and process management: the productivity dilemma revisited, Academy of Management Review 28, (2), 238-256

Ben-Tovim, D.I., Bassham, J.E., Bennett, D.M., Dougherty, M.L., Martin, M.A., O'Neill, S.J., Sincock, J.L. and Szwarcbord, M.G., 2008. Redesigning care at the Flinders Medical Centre: clinical process redesign using "lean thinking". *Medical Journal of Australia*, *188*(S6), pp.S27-S31.

Berends, H., Boersma, K. and Weggeman, M., 2003. The structuration of organizational learning. Human relations, 56(9), pp.1035-1056

Berger, P., Luckmann, T. (1966) The Social Construction of Reality NewYork: Penguin

Berwick, D.M., 1989. Continuous improvement as an ideal in health care. New England Journal of Medicine, 320(1), pp.53-56.

Berwick, D.M., Nolan, T.W. , Whittington, J. (2008) The triple aim: care, health and cost, Health Affairs, 27 (3), 759- 769

Black, T. R., (1999) Doing quantitative Research in the Social Sciences: an Integrated Approach to Research Design, Measurement and Statistics, London: SAGE

Blackman, D., & Sadler-Smith, E. (2009). The silent and the silenced in organizational knowing and learning. Management Learning, 40(5), 569-585.

Blair, J.D. and Payne, G.T., (2000). The paradox prescription: Leading the medical group of the future. Health Care Management Review, 25(1), pp.44-58.

Bohmer R.M, Edmondson, A. (2001), Organisational Learning in Health Care, Health Forum Journal, March/April 2001, 31 - 35

Bogosian, R. and Stefanchin, J.E., 2013. Silence is not always consent: Employee silence as a barrier to knowledge transfer. The 2013 Organizational Learning. In *Knowledge and Capabilities conference (OLKC)*.

Bontis, N., Crossan, M.M., Hulland, J. (2002) Managing an Organizational Learning systems by aligning stock and flows, Journal of Management Studies, 39, (4), 1-48

Bourgeault, I., Dingwall, R., DeVries, R (2010) The SAGE Handbook of Qualitative Methods in Health Research, London: SAGE

Bogosian, R., & Stefanchin, J. (2013) Silence is not always consent: Employee silence as a barrier to knowledge transfer. In Proceedings of the International Conference on Organisational Learning, Knowledge and Capabilities.

Bowen, G.A., (2009) Document analysis as a qualitative research method. *Qualitative research journal*, *9*(2), pp.27-40.

Bovey, W.H. and Hede, A., 2001. Resistance to organisational change: the role of defence mechanisms. *Journal of managerial psychology*, *16*(7), pp.534-548.

Brandao de Souza, L (2009), "Trends and approaches in Healthcare" Leadership in Health Services, 22 (2), pp 121-139

Brandi, U. Elkjaer, B (2011) Organizational Learning viewed from a social learning perspective , Easterby-Smith and Lyles (eds) Handbook of Organizational learning and Knowledge Management, West Sussex:Wiley

Brown, J.S. and Duguid, P., (2001). Knowledge and organization: A social-practice perspective. Organization science, 12(2), pp.198-213

Brown, J.S. and Duguid, P., (2017). The Social Life of Information: Updated, with a New Preface. Harvard Business Review Press.

Bryant, A., Charmaz, K, (2007) SAGE Handbook of Grounded Theory, London :SAGE

Bryman, A. (2008) Social Research Methods, Oxford, Oxford University Press Brown, J.S., Duguid, P. (1991) Organizational Learning and Communities of Practice: Toward a Unified theory of Learning and Innovation, Organization Science, 2 (1), 40-57

Buchanan, D., Fitzgerald, L., Ketley, D., Gollop, R., Jones, J.L., Lamont, S.S., Neath, A. and Whitby, E., 2005. No going back: A review of the literature on sustaining organizational change. *International Journal of Management Reviews*, *7*(3), pp.189-205.

Burrell, G and Morgan, G. (1979) Social Paradigms and organizational analysis of the sociology of corporate life, London: Heinemann

Bunderson, J.S. and Reagans, R.E., 2011. Power, status, and learning in organizations. Organization Science, 22(5), pp.1182-1194.

Cangelosi, V.E. Dill, W.R. (1965) Organizational Learning: Observations Towards a Theory, Administrative Science Quarterly, 10, (2),75-203

Cannon, M.D., and Edmondson, A. (2001) Confronting Failure: Antecedents and Consequences of Shared Beliefs about Failure in Organizational Work Groups, Journal of Organizational Behaviour, 22,161-177

Carlone, D., 2006. The Ambiguous Nature of a Management Guru Lecture Providing Answers While Deepening Uncertainty. Journal of Business Communication, 43(2), pp.89-112Carroll, J.S., Edmondson, A.C. (2002) Leading Organisational Learning in Health Care, Quality Health Care, 11, 51-56

Charmaz, K. (2005) Grounded theory for the 21st Century: Applications for Advancing social Justice, in NK Denzin and YS Lincoln SAGE handbook of qualitative research, p 507- 536

Charmaz, K. (2006) Constructing Grounded Theory: a Practical Guide Through Qualitative analysis, London:SAGE

Charmaz, K. (2007) I in Denzin and Lincoln, SAGE Handbook for qualitative research 3rd edition, SAGE:London

Charmaz, K., Henwood, K. (2007) Grounded theory in Psychology in C. Willig and W. Stainton-Rogers(eds), Handbook of qualitative Research In Psychology, London:SAGE

Chun, M. and Mooney, J., (2009) CIO roles and responsibilities: Twenty-five years of evolution and change. *Information & management*, *46*(6), pp.323-334.

Clark, T. and Salaman, G., 1996. The management guru as organizational witchdoctor. Organization, 3(1), pp.85-107.

Cauldwell, C., Brexler, J. and Gillian T. (2005) Engaging Physicians in Lean six sigma, Quality Progress, 38, (11), 42 – 46

Cohen, M.D, Bacdayan, P (1994) Organizational Routines are stored as procedural memory evidence from a laboratory study, Organization Science, 5, 554-568

Cook, S.D.N., Yanow, D. (1993). Culture and Organizational learning, Journal of Management Inquiry, 2 (4), 373-390

Corbin, J., Strauss, A.L. (1990) Grounded Theory Research: Procedures, Canons, and evaluative Criteria, Qualitative Sociology,13, (1), 3 – 21

Corley, K.G., Gioia, D.A. (2004) Identity Ambiguity and Change in the Wake of a Corporate Spin off Administrative Science Quarterly, 49, (2), 173-208

Crossan, M. M., Lane, H. W., White, R.E. (1999) An Organisational learning Framework: From Intuition to Institution, Academy of Management Review, 24, (3), 552-537

Crossan, M.M., Bedrow, I. (2003) Organizational Learning and Strategic Renewal. Strategic Management Journal 24, (11), 1087-1105

Crossan, M.M., Apaydin, M. (2010) A multi-dimensional framework of organizational learning: a systematic review of the literature, Journal of Management Studies,57 (6),1154-1191

Crossan, M.M., Maurer, C.C., White, R.E. (2011).Reflections on the 2009 AMR Decade Award, Do we have a Theory of Organizational Learning?, Academy of Management Review, 36 (3), 446-460

Converse, J.M., Presser, S. (1986) Survey Questions: handcrafting the standardized questionnaire SAGE: London

Cyert, R.M., March, J.G. 1963. A Behavioral theory of the Firm, Univeristy of Illinois-Urbana-Champaign

Czarniawska, B. and Mazza, C., 2003. Consulting as a liminal space. Human relations, 56(3), pp.267-290.

Davies, H.T. and Nutley, S.M., 2000. Developing learning organisations in the new NHS. British Medical Journal, 320(7240), p.998.

DeFillipi and Ornstein, S. (2011). Psychological Perspectives Underlying Theories of Organizational Learning, pp19-37, in Easterby-Smith, M., Lyles, M.A. (eds) Blackwell Handbook of Organizational Learning and Knowledge Management, Blackwell: London

Denning, S., 2006. Effective storytelling: strategic business narrative techniques. Strategy & Leadership, 34(1), pp.42-48.

Denzin, N.K., Lincoln, Y.S., (2002) The Qualitative Inquiry Reader SAGE: Thousand Oaks

Denzin, N.K., Lincoln, Y.S. (2005) The SAGE Handbook of Qualitative Research, 3rd edition, SAGE: London

Denzin, N.K. and Lincoln, Y.S., (2008). Strategies of qualitative inquiry (Vol. 2). Sage.

Dierkes, M., Antal, A.B., Child, J. and Nonaka, I (2001) Handbook of Organizational Learning and Knowledge, Oxford University Press: Oxford

Dixon, N.M. (1999) The Organisational Learning Cycle: How can we learn collectively, Aldershot: Gower Publishing Limited

Dodgson, M., (1993) Organizational Learning: A Review of Some Literatures, Organization Science, 14 (3), 375-394

Dowdall, G.W. and Golden, J., 1989. Photographs as data: an analysis of images from a mental hospital. Qualitative Sociology, 12(2), pp.183-213.

Durant, R.F., Kramer, R., Perry, J.L., Mesch, D. and Paarlberg, L., 2006. Motivating employees in a new governance era: The performance paradigm revisited. *Public Administration Review*, *66*(4), pp.505-514.

Dutta, D.K., Crossan, M.M. (2005), The Nature of Entrepreneurial Opportunities the Process using the 4I Organizational Learning Framework, Entrepreneurship Theory and Practice, July, pp. 425 - 449

Dyne, L.V., Ang, S. and Botero, I.C., (2003) Conceptualizing employee silence and employee voice as multidimensional constructs. *Journal of management studies*, *40*(6), pp.1359-1392.

Easterby-Smith, M. (1997) Disciplines of Organizational learning: contributions and Critiques , Human Relations, 50, (9), 1085-1113

Easterby-Smith, M., Burgoyne, J., Araujo, L. (1999) Organizational learning and the learning organization, London: SAGE

Easterby-Smith, M. and Lyles, M., (2003). Re-Reading" Organizational Learning": Selective Memory, Forgetting, and Adaptation. The Academy of Management Executive (1993-2005), pp.51-55

Easterby-Smith, M., Lyles. M. (2011) Handbook of Organizational Learning and Knowledge Management, 2nd edition, West Sussex :Wiley and Sons

Easterby-Smith, M., Antonacopoulou, E., Simm, D. and Lyles, M., (2004). Constructing contributions to organizational learning: Argyris and the next generation. Management Learning, 35(4), pp.371-380.

Edmondson, A.C. (1999) Psychological Safety and learning behavior in work teams, Administrative Science Quarterly, 44, (2), 350-383

Edmondson, A.C., Bohmer, R.M. Pisano, G. (2001) Disrupted routines: Effects of team learning on new technology adaption, Administrative Science Quarterly 46, (4), 685-716

Edmondson, A. (2002), The local and Variegated Nature of Learning in Organizations: A Group-Level Perspective, Organization Science 13, (2), 128-146

Edmondson, A. (2003), Speaking up in the Operating Room How Team Leaders Promote Learning In Interdisciplinary Teams, Journal of Management Studies, 40, (6), 1419 -1452

Eisenhardt, K.M., (1989), Making Fast Strategic decisions in high-velocity environments, Academy of Management Journal, 32(3), 543-576

Eisner, E. (1991) The Enlightened Eye: Qualitative Inquiry and the Enhancement of Educational Practice, Macmillan, NY

Elsbach, K.D. (1994). Managing organizational legitimacy in the California Cattle Industry. Administrative Science Quarterly, 39,(1), 57-88.

Emerson, R.M., Fretz, R.I. and Shaw, L.L., (2001) Participant observation and fieldnotes. *Handbook of ethnography*, pp.352-368.

Feldman, M.S. (2000), Organizational Routines as a Source of Continuous change. Organization Science, 11, (6), 611-629.

Feldman, M.S., Pentland, B. T. (2003), Reconceptualising organisational routines as a source of flexibility and change. Administrative Science Quarterly, 48, 94-118

Ferris, G.R., Treadway, D.C., Perrewé, P.L., Brouer, R.L., Douglas, C. and Lux, S., 2007. Political skill in organizations. Journal of Management, 33(3), pp.290- 320.

Ferreira and Bailey (2004) Trends in cognitive Sciences 8, (5)pp 231- 237

Fiol, M., Lyles, M. A., (1985) Organisational Learning, Academy of Management Review, 10, (4), 803-813

Fillingham, D., 2007. Can lean save lives?. Leadership in health services, 20(4), pp.231-241.

Fincham, R., 1999. The consultant–client relationship: Critical perspectives on the management of organizational change. Journal of Management Studies, 36(3), pp.335-351.

Fincham, R. and Clark, T., 2002. Preface: Management consultancy: Issues, perspectives, and agendas. *International Studies of Management & Organization*, pp.3-18.

Flinchbaugh, J. (2008) Connecting lean and organizational learning. Management Services, 52(3), pp.33-39. Centre for Lean Enterprises,

Ford, J.D., Ford, L. W., and D'Amelo, A. (2008) Resistance to Change: The rest of the Story Academy of Management Review, v33, (2), 362-377

Forster, N. (1994). The Analysis of Company Documentation, In Cassell and G Symons (eds), Qualitative Methods in Organisational Research: 147-166, Thousand Oaks, CA: SAGE

Gabriel, Y., 2000. Storytelling in Organizations: Facts, Fictions, and Fantasies: Facts, Fictions, and Fantasies. OUP Oxford.

Garfield, S., 10. reasons why people don't share their knowledge. Knowledge Management Review, 9(2), pp.10-11

Garvin, D.A. (2000) Learning in Action: a guide to putting the learning organization to work, Harvard Business Press

Gawande, A. (2009), The Checklist Manifesto, Metropolitan Books, Henry Holt and Company, New York

Garfield, S., 10. reasons why people don't share their knowledge. Knowledge Management Review, 9(2), pp.10-11

Geiger, D. and Antonacopoulou, E., 2009. Narratives and organizational dynamics: Exploring blind spots and organizational inertia. The Journal of Applied Behavioral Science, 45(3), pp.411-436

Gersick, C., Hackman, R (1990) Habitual routines in task performing groups, organizational behaviour and human decision, 47, (1), 65-97

Gill, M.J., 2013. Elite identity and status anxiety: an interpretative phenomenological analysis of management consultants. Organization, id 1350508413514287.

Gilbert, C.G. (2005) Unbundling the structure of inertia: Resource versus routine rigidity, Academy of Management Journal, 48 (5),741-763

Gilley, J. W., Broughton, N.W. & Maycunich, A. (1999) The performance challenge: developing management systems to make employees your greatest asset. Cambridge, MA: Perseus

Gioia, D.A. and Chittipeddi, K., (1991) Sensemaking and sensegiving in strategic change initiation. Strategic management journal, 12(6), pp.433-448.

Gioia, D.A., Corley, K.G. and Hamilton, A.L., (2013) Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. Organizational Research Methods, 16(1), pp.15-31

Given, L.M. ed., (2008) *The Sage encyclopedia of qualitative research methods*. Sage publications.

Glaser, B.G., Strauss, A.L. (1967), Discovery of Grounded theory; Strategies of Qualitative Research, Weidenfled and Nicolson, London

Glass, G.V., Hopkins, K.D. (1996) Statistical Methods in education and Psychology, 3rd edition, Boston: Allyn & Bacon

Goulding, C., (2002) *Grounded theory: A practical guide for management, business and market researchers*. Sage.

Grant, D., Keenoy, T.W. and Oswick, C. eds., (1998) Discourse and organization. Sage.

Grant, D., Keenoy, T. and Oswick, C., (2001). Organizational discourse: Key contributions and challenges. International Studies of Management & Organization, 31(3), pp.5-24.

Greenhalgh, T., Robert, G., Bate, P., Macfarlane, F. and Kyriakidou, O., 2008. Diffusion of innovations in health service organisations: a systematic literature review. John Wiley & Sons.

Greenwood, R., Suddaby, R. and Hinings, C.R., 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. Academy of management journal, 45(1), pp.58-80.

Grimshaw, A., (2001). The ethnographer's eye: Ways of seeing in anthropology. Cambridge University Press.

Guba, E.G. and Lincoln, Y.S., (1982). Epistemological and methodological bases of naturalistic inquiry. Educational Technology Research and Development, 30(4), pp.233-252.

Guba, E.G., Lincoln, Y.S., (2005), Paradigmatic Controversies, Contradictions and Emerging Confluences Denzin, N.K., Lincoln, Y.S. (eds), The Sage Handbook of Qualitative Research, 3rd Edition, SAGE Publications, London

Gubrium, A. and Harper, K., (2016) *Participatory visual and digital methods*. Routledge.

Gurpinar, E., Kulac, E., Tetik, C., Akdogan, I. and Mamakli, S., 2013. Do learning approaches of medical students affect their satisfaction with problem-based learning?. Advances in physiology education, 37(1), pp.85-88.

Haldin-Herrgard, T., 2000. Difficulties in diffusion of tacit knowledge in organizations. Journal of Intellectual capital, 1(4), pp.357-365.

Hargadon, A., Fanelli, a. 2002. Action and Possibility: Reconciling dual perspectives of knowledge in organisations. Organization Science, 13 (3) 290-302

Haunschild, P., Sullivan, B.N.I. (2002) Learning complexity: Effects of prior accidents and incidents on airlines' learning, Administrative Science Quarterly, 47, (4), 609-643

Haynes, K., (2012) Reflexivity in qualitative research. *Qualitative organizational research: Core methods and current challenges*, pp.72-89.

Henriksen, K., & Dayton, E. (2006). Organizational silence and hidden threats to patient safety. Health services research, 41(4p2), 1539-1554

Herremans, I. and Isaac, R., (2006). RELATIONSHIPS AMONG INTELLECTUAL CAPITAL, UNCERTAIN KNOWLEDGE, AND CULTURE. The Institute for Business and Finance Research, p.17.

Hodgson, G.M. and Knudsen, T. (2004), The Firm as an Interactor: Firms as Vehicles for Habits and Routines, Journal of Evolutionary Economics, 14, (3), 283 – 307

Holste, J.S. and Fields, D., 2010. Trust and tacit knowledge sharing and use. Journal of knowledge management, 14(1), pp.128-140

Holstein, J.A. and Gubrium, J.F., (1997) Active interviewing. *Qualitative research: Theory, method and practice*, pp.113-129.

Hornstein, H., 2001. Organizational Development and Change Management Don't Throw the Baby out with the Bath Water. The Journal of Applied Behavioral Science, 37(2), pp.223-226

Huczynski, A., 2012. Management gurus. Routledge. London

Hu, Q., Found, P., Williams, S. and Mason, R., 2016. Lean Thinking and Organisational Learning: How Can They Facilitate Each Other?. In Understanding the Lean Enterprise (pp. 61-77). Springer International Publishing.

Hu, Q., Found, P., Williams, S., & Mason, R. (2014). The role of consultants in organizational learning. Journal of Management, 15(4), 29.

Huber, G.P., (1991). Organisation learning, the contributing processes and literatures, Organisation Science, 2, (1) 88-115

Huberman, A. M. and Miles, M.B. (1983) Drawing valid meaning from qualitative data: some techniques of data reduction and display, Quality and Quantity, 17, 281-239

Isabella, L., (1990). Evolving interpretations as a change unfolds: How managers construe key organisational events, The Academy of Management Journal, 33, (1), 77-41

James, B.C. and Savitz, L.A., 2011. How Intermountain trimmed health care costs through robust quality improvement efforts. Health Affairs, 30(6), pp.1185- 1191.

Jimmerson, C., Weber, D. and Sobek, D.K., 2005. Reducing waste and errors: piloting lean principles at Intermountain Healthcare. The Joint Commission Journal on Quality and Patient Safety, 31(5), pp.249-257.

Jones, A. and Kelly, D., 2014. Deafening silence? Time to reconsider whether organisations are silent or deaf when things go wrong. BMJ quality & safety, 23(9), pp.709-713.

Hoff, T.J., (1999). The paradox of legitimacy: physician executives and the practice of medicine. Health Care Management Review, 24(4), pp.54-64.

Hyde, P., & Davies, H. T. (2004). Service design, culture and performance: Collusion and co-production in health care. Human Relations, 57(11), 1407-1426.

Kanter, R.M., (2003) *Challenge of organizational change: How companies experience it and leaders guide it*. Simon and Schuster.

Kim, D.H. (1993) The Link between Individual and Organisational Learning in D. Klein (editor) The Strategic Management of Intellectual Capital, Butterworth- Heinemann

Kumar, N., Stern, L. W., Anderson, J.C. (1993) “Conducting Inter-organisational research using key informants”, Academy of Management Journal, 36, 1633- 1651

Kumar, R. (2005). Research Methodology for Beginners London: SAGE

Kolb, D.A., (1984). Experiential Learning: Experience as the source of learning and development New Jersey :Prentice Hall

Kolberg, B, Dahlgaard, J. J., Brehmer, P-O (2006) “Measuring Lean initiatives in health care services: issues and findings” International Journal of Productivity and Performance Management, 56 (1) p 7-24

Kluge, J., Stein, W., & Licht, T. (2001). Knowledge Unplugged: The McKinsey Global Survey of Knowledge Management. Palgrave Macmillan.

Kvale, S., (1983) The qualitative research interview: A phenomenological and a hermeneutical mode of understanding. *Journal of phenomenological psychology*, *14*(2), p.171.

Ladge, J.J. Clair, J.A., Greenberg, D. (2012) Cross-domain Identity Transition during Liminal Periods: Constructing Multiple Selves as Professional and Mother during Pregnancy, Academy of Management Journal, 55 (6), 1449-1471

Lam, A, (2004) “Knowledge, Learning and Organizational Embeddedness”, Dynamics of Organizational Change and Learning, 429-446

Lam, A. & Lambermont–Ford, J. P. (2010) Knowledge sharing in organisational contexts: a motivation based perspective, Journal of Knowledge Management, 14 (1) 51-66

Langley, A., (2009) Studying processes in and around organizations. *The Sage handbook of organizational research methods*, *409*, p.429.

Laschinger, H.K.S. and Fida, R., 2015. Linking nurses' perceptions of patient care quality to job satisfaction: the role of authentic leadership and empowering professional practice environments. *Journal of Nursing Administration*, *45*(5), pp.276-283.

Lave, J., (1988) *Cognition in practice: Mind, mathematics and culture in everyday life*. Cambridge University Press.

Lave, J. and Wenger, E., (1991) *Situated learning: Legitimate peripheral participation*. Cambridge university press.

Lantelme, E. Formoso, C.T. (2000) July Improving performance though measurement: the application of lean production and OL principles Eighth annual Conference of the International Group for Lean construction

Lawrence, T. B., Mauws, M.K., Dyck, B., Kleysen, R. F. (2005), the Politics of organisational Learning: Integrating Power in the 4I framework, Academy of Management Review, 30, (1), 180-191

Leavitt, B., March, J.G., (1988). Organisational Learning, Annual Review of Sociology, 14, 319-340

Legge, K., 1995. What is human resource management?. In *Human resource management* (pp. 62-95). Palgrave, London.

Lehesvirta, T., (2004). Learning processes in a work organization: From individual to collective and/orvice versa?. Journal of Workplace Learning, 16(1/2), pp.92-100.

Leonard, D.A. and Sensiper, S., 2011. The role of tacit knowledge in group innovation. In Managing Knowledge Assets, Creativity and Innovation (pp. 301-323).

Levinthal, D.A., March, J.G. (1991) The myopia of learning Strategic Management Journal 14, S2, 95-112

Lewis, S., 1995. Paradox, process and perception: the role of organizations in clinical practice guidelines development. CMAJ: Canadian Medical Association Journal, 153(8), p.1073.

Li, S., Easterby-Smith, M., Bartunek, J, (2009). Research methods for organizational learning: the transatlantic gap, management learning, 40, (4), 439-447

Lincoln, Y, Guba, S (1985). Naturalistic Inquiry Beverly Hills, CA: SAGE Lipshitz, R., Popper, M. and Freidman, V. J. (2002) A Multifacet Model of Organizational learning, Journal of Applied Behavioural Science, 36, (1), 78-98 Locke, K. (2001) Grounded theory in management research. London:SAGE

Luscher, L.S., Lewis, M. and Ingram, A., 2006. The social construction of organizational change paradoxes. *Journal of Organizational Change Management*, *19*(4), pp.491-502.

Maier, G.W., Prange, C., Rosenthal, L. (2001) Psychological Perspectives of organizational Learning in Dierkes, Antal, Child, Nonaka (eds) Handbook of Organizational Learning and Knowledge, Oxford University Press: oxford

Maitlis, S. and Lawrence, T.B., (2007) Triggers and enablers of sensegiving in organizations. Academy of management Journal, 50(1), pp.57-84.

Mantere, S. and Ketokivi, M., (2013) Reasoning in organization science. *Academy of management review*, *38*(1), pp.70-89.

Massey, C. and Walker, R., (1999) Aiming for organisational learning: consultants as agents of change. The Learning Organization, 6(1), pp.38-44.

Martin, R., (1978) Expert and referent power: A framework for understanding and maximizing consultation effectiveness. Journal of School Psychology, 16(1), pp.49-55.

Marquardt, M.J., (2011) Building the learning organization: Mastering the five elements for corporate learning. Hachette UK.

Mazzocato, P., Savage, C., Brommels, M., Aronsson, H. and Thor, J., (2010) Lean thinking in healthcare: a realist review of the literature. Quality and Safety in Health Care, 19(5), pp.376-382.

McCallin, A., (2001) Interdisciplinary practice–a matter of teamwork: an integrated literature review. Journal of clinical nursing, 10(4), pp.419-428.

McCann, L., Hassard, J.S., Granter, E. and Hyde, P.J., (2015) Casting the lean spell: The promotion, dilution and erosion of lean management in the NHS. human relations, 68(10), pp.1557-1577.

McCann, L., Hassard, J., Hyde, P., Granter, E. (2012) Casting the Lean Spell: Mechanisms of Hope in UK Healthcare Restructuring, Academy of Management Conference Paper

McGill, M.E., Slocum, J.W. and Lei, D., (1992) Management practices in learning organizations. Organizational dynamics, 21(1), pp.5-17.

McLaughlin, S., Paton, R. A., & Macbeth, D. K. (2008). Barrier impact on organizational learning within complex organizations. Journal of knowledge management, 12(2), 107-123

McNulty, T., & Ferlie, E. (2002). Reengineering Health Care: The Complexities of Organizational Transformation: The Complexities of Organizational Transformation. Oxford University Press.

Mento, A.J., Jones, R.M. and Dirndorfer, W (2002) A change Management Process: Grounded in both theory and practice, Journal of Change Management, 3 (1), p 45-60

Miller, K.D., Pentland, B.T., Choi, S. (2012) Dynamics of Performing and Remembering Routines, Journal of Management Studies, 49, 1536 - 1558

Milliken, F.J., Morrison, E.W. and Hewlin, P.F., 2003. An exploratory study of employee silence: Issues that employees don't communicate upward and why. Journal of management studies, 40(6), pp.1453-1476.

Miner, A.S., (1991) Organizational Evolution and the Social Ecology of Jobs, American Sociological Review, 56 (6), 772- 785

Miner, A.S,, Mezias, S.J. (1996) Ugly duckling no more: Pasts and futures of organizational learning research. Organization Science 7 (1), 88-99 Morrison, E. W., & Milliken, F. J. (2003). Speaking up, remaining silent: The dynamics of voice and silence in organizations. Journal of Management Studies, 40(6), 1353-1358.

Monden, Y., 1983. *Toyota production system: practical approach to production management*. Engineering & Management Press.

Mura, M., Lettieri, E., Radaelli, G. and Spiller, N., 2013. Promoting professionals' innovative behaviour through knowledge sharing: the moderating role of social capital. Journal of Knowledge Management, 17(4), pp.527-544.

Nembhard, I.M. and Edmondson, A.C., 2006. Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. Journal of Organizational Behavior, 27(7), pp.941- 966

Nelson, R.R. and Winter, S. (1982). An Evolutionary Theory of Economic change. Belknap Press of Harvard University Press: Cambridge MA

Nicolini, D, Gherardi, S., Yanow, D. 2003). Knowing in an organization: a practiced based approach, ME: Sharpe

Nutley, S.M., Davies, H.T.O. (2001), Developing Learning in the NHS, Medical Education, 35, 5-42

Nonaka, I., (1994) A Dynamic Theory of Organizational Knowledge Creation, Organization Science, 5 (1):14-37

Nonaka, I. Takeuchi, H (1995) The Knowledge Creating Company, Harvard Business Review on Knowledge Management

Nystrom, P.C. and Starbuck, W.H., 2015. To avoid organizational crises, unlearn. Unlearn (December 25, 2015)

O'Brien, B.C., Harris, I.B., Beckman, T.J., Reed, D.A. and Cook, D.A., 2014. Standards for reporting qualitative research: a synthesis of recommendations. Academic Medicine, 89(9), pp.1245-1251.

O'leary, Z., (2004) *The essential guide to doing research*. Sage.

Palmer, T.B. Short J.C, (2008) Mission Statements in U.S. colleges of Business: An Empirical Examination of their Content with Linkages to Configurations and Performances, Academy of Management Learning and Education, 7, (4), 454- 470

Pallant, J. (2010) SPSS Survival manual, 4th Edition, Berkshire England: Open University Press

Patton, M.Q. (1990) Qualitative evaluation and research methods, London:SAGE Patton, M.Q. (2002) Two decades of developments in qualitative Inquiry A personal, Experiential Perspective, Qualitative Social Work, 1, (3), 261-283

Payne, G. Payne, J. (2004) Key Concepts in Social Research, London:SAGE

Pentland, B. T., Haerem, T., Hillison, D. (2011) The (N) Ever changing World: Stability and Change in Organizational Routines, Organization Science, 22, (6), 1369 - 1383

Pentland, B. T., Feldman, M. S., Becker, M.C. and Liu, P. (2012) Dynamics of Organizational Routines: A generative Model, Journal of Management Studies, 49, 1484 - 1508

Pettigrew, A.M., 2014. *The politics of organizational decision-making*. Routledge.

Phillips, M.E. and Graeff, T.R., 2014. Using an in-class simulation in the first accounting class: Moving from surface to deep learning. Journal of Education for Business, 89(5), pp.241-247.

Pfeffer, J., Salancik, GR (1978) The external control of organizations: a Resource dependence perspective, Stanford University Press

Pink, S., (2003) Interdisciplinary agendas in visual research: re-situating visual anthropology. Visual studies, 18(2), pp.179-192

Popper, M., Lipshitz, R. (1998) Organizational learning, mechanisms, culture and feasibility, Management Learning, 31 (2), 181-196

Powell, W.W. and DiMaggio, P.J. eds., (2012) The new institutionalism in organizational analysis. University of Chicago Press

Preissle, J., (2011) Qualitative futures: Where we might go from where we've been. *The SAGE handbook of qualitative research*, pp.685-698.

Pratt, M.G., Rockmann, K.W. and Kaufmann, J.B., (2006) Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of management journal*, *49*(2), pp.235-262.

Proudlove, N., Moxham, C. and Boaden, R., 2008. Lessons for lean in healthcare from using six sigma in the NHS. Public Money and Management, 28(1), pp.27- 34.

Prosser, J. and Loxley, A., 2008. Introducing visual methods.

Radnor, Z.J., Holweg, M and Waring, J (2012) Lean in Healthcare: The Unfilled Promise? Social Science and Medicine, 74, (3), 364-71

Radnor, Z. J., Osborne, S.P. (2012) Lean: A failed theory for public services, Public Management Review, 10, 1-23

Ramcharan, P., Cutliffe, J.R. (2001) Judging the ethics of qualitative research: considering the 'ethics as process' model, Health and Social Care in the Community, 9(6), 358-366

Rampersad, H.K., (2004). Learning and unlearning in accordance with organizational change. *Organization Development Journal*, *22*(4).

Rivard, P.E., Rosen, A.K., Carroll, J.S., (2006), Enhancing Patient Safety through Organizational Learning: Are Patient Safety Indicators a Step in the Right direction, Health Services Research, 41, (2), 1633- 1653

Rosenthal, R. and Rosnow, R.L., (2008) Essentials of Behavioural Research: Methods and Data analysis, 3rd Edition, New York: McGraw Hill

Salancik, G.R., Pfeffer J. (1978) A social information processing approach to job attitudes and task design, Administrative Science Quarterly, p 224-253

Schilling, J., Kluge, A., (2009) Barriers to Organizational Learning: An Integration of theory and research, International Journal of Management Reviews, 11, (3), 337-360

Schulz, D. (2001) Organizational Learning in Baum, D. (ed) Companion to Organizations, New York:Blackwell

Schulz, M., 2001. The uncertain relevance of newness: Organizational learning and knowledge flows. *Academy of management journal*, *44*(4), pp.661-681.

Senge, P. (1990) The Fifth discipline: the Art and practice of the learning Organization, Century:London

Shavelson, R.J. 1996. Statistical Reasoning for the behavioural Sciences. 3rd Edition, Boston: Allyn & Bacon

Shortell, S.M., Casalino, L.P. (2010) Implementing qualifications criteria and technical assistance for accountable care organizations, Journal of American Medical Association, 303 (17), 1747-1748

Schilling, J., & Kluge, A. (2009). Barriers to organizational learning: An integration of theory and research. International Journal of Management Reviews, 11(3), 337-360.

Schneller, E.S., Greenwald, H.P., Richardson, M.L. and Ott, J., 1997. The physician executive: role in the adaptation of American medicine. Health Care Management Review, 22(2), pp.90-96

Scott, B.A., Barnes, C.M. and Wagner, D.T., 2012. Chameleonic or consistent? A multilevel investigation of emotional labor variability and self-monitoring. *Academy of management journal*, *55*(4), pp.905-926

Sillince, J. and Shipton, H., 2013. More than a cognitive experience: Unfamiliarity, invalidation, and emotion in organizational learning. *Journal of Management Inquiry*, *22*(3), pp.342-355.

Sonenshein, S., 2010. We're Changing—Or are we? untangling the role of progressive, regressive, and stability narratives during strategic change implementation. Academy of Management Journal, 53(3), pp.477-512.

Spear, S.J., 2005. Fixing health care from the inside, today. Harvard business review, 83(9), p.78

Spencer, B.A., 1994. Models of organization and total quality management: a comparison and critical evaluation. *Academy of management review*, *19*(3), pp.446-471.

Stanczak, G.C. ed., (2007). *Visual research methods: Image, society, and representation*. Sage Publications.

Starbuck, W.H. Hedburg, B (2003). How organizations learn from success and failure. In Dierkes, M., Berthion-Antal, A.B. Child, J., Nonaka, I. (eds) Handbook of Organizational Learning and Knowledge, Oxford: Oxford University Press, pp 327-350

Stacey, J. (1988) Can there be Feminist Ethnography? Women's Studies International Forum 11 (1), p 5-19

Stan, M., Vermeulen, F. (2013) Selection at the Gate: difficult Cases, Spillovers and Organizational learning, Organization Science, 24, (3), 796-812

Stene, E.O. (1940) An approach to a science of administration, the American political science review,34, (6), 1124-1137

Sterman, J.D., 2001. System dynamics modeling: tools for learning in a complex world. California management review, 43(4), pp.8-25.

Stevens, E. and Dimitriadis, S., 2004. New service development through the lens of organisational learning: evidence from longitudinal case studies. Journal of Business Research, 57(10), pp.1074-1084.

Strang, D. and Meyer, J.W., 1993. Institutional conditions for diffusion. *Theory and society*, *22*(4), pp.487-511.

Sturdy, A. (2004). The adoption of management ideas and practices, theoretical perspectives and possibilities, Management Learning, 35 (2), 155-179

Symons, G. Cassell, C. (2012) Qualitative Organizational Research: Core Methods and Current challenges, London:SAGE

Sun, P-Y.T., Scott, J.L. (2005), An investigation of the barriers to transfer of knowledge, Journal of Knowledge Management, 9, (2), 75-90

Swart, J., & Harcup, J. (2013). 'If I learn do we learn?': The link between executive coaching and organizational learning. Management Learning, 44(4), 337-354.

Szulanski, G. (2003). Sticky Knowledge: Barriers to Knowing in the Firm, SAGE: Thousand Oaks, CA

Tashakkori, A., Teddlie, C., (2009) Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences, London: SAGE Publications

Tashakkori, A. and Teddlie, C. (2010) SAGE Handbook of Mixed Methods in Social & Behavioral Research, 2nd Edition, London: Sage Publications Ltd.

Thorne, S., 2000. Data analysis in qualitative research. Evidence-based nursing, 3(3), pp.68-70.

Tong, A., Sainsbury, P. and Craig, J., 2007. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International journal for quality in health care, 19(6), pp.349-357.

Toussaint, J., 2009. Writing the new playbook for US health care: lessons from Wisconsin. *Health Affairs*, *28*(5), pp.1343-1350.

Toussaint, J.S. and Berry, L.L., 2013, January. The promise of Lean in health care. In *Mayo clinic proceedings* (Vol. 88, No. 1, pp. 74-82). Elsevier.

Tracy, S.J., 2010. Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. Qualitative inquiry, 16(10), pp.837-851.

Tsang, E.W.H., (1997) Organizational learning and the learning organization: a dichotomy between descriptive and prescriptive research, Human Relations, 50, 1, 73-89

Tucker, A. L., Edmondson, A. C., (2003) Why Hospitals Don't Learn from Failure: Organisational and Psychological Dynamics that Inhibit System Change, California Management Review, 2003, 45, (2), 55-72

Van Dijke, M. and Poppe, M., (2006) Striving for personal power as a basis for social power dynamics. *European Journal of Social Psychology*, *36*(4), pp.537-556.

Vannini, P. , Waskul, D. and Gottschalk, S. (2012) The Senses of Self, Society and Culture, New York:Routledge

Vince, R., 2001. Power and emotion in organizational learning. Human Relations, 54(10), pp.1325-1351.

Vince, R. 2002 The politics of imagined stability: a psychodynamic understanding of change at Hyder plc, Human Relations, 55, 10, 1189-1208

Vince, R. and Broussine, M., 2000. Rethinking organisational learning in local government. *Local Government Studies*, *26*(1), pp.15-30.

Vince, R. Saleem, T (2004) The Impact of Caution and Blame on organizational learning, Management Learning, 35, 2, 133-154

Vakola, M., & Bouradas, D. (2005). Antecedents and consequences of organisational silence: an empirical investigation. Employee Relations, 27(5), 441-458.

Walker, I. (2010), Research Methods and Statistics, Basingstoke: Palgrave Macmillian

Wang, Y., & Huzzard, T. (2011). The impact of lean thinking on organizational learning. In OLKC 2011-Making Waves, Conference Proceedings, Hull University Business School.

Waring, J., Currie, G., Crompton, A. and Bishop, S., 2013. An exploratory study of knowledge brokering in hospital settings: Facilitating knowledge sharing and learning for patient safety?. Social Science & Medicine, 98, pp.79-86.

Watkins, K.E. and Marsick, V.J., 1992. Towards a theory of informal and incidental learning in organizations∗. International journal of lifelong education, 11(4), pp.287-300.

Weick, K. (1996) Theory construction as disciplined reflexivity: trade-offs in the 90s, Academy of Management Review, 303-313

Werr, A. and Styhre, A., 2002. Management consultants-friend or foe? Understanding the ambiguous client-consultant relationship. *International Studies of Management & Organization*, *32*(4), pp.43-66.

Wenger, E., (2010) Communities of practice and social learning systems: the career of a concept. In *Social learning systems and communities of practice* (pp. 179-198). Springer, London.

Wenger, E., McDermott, R.A. and Snyder, W., 2002. Cultivating communities of practice: A guide to managing knowledge. Harvard Business Press.

Westphal, J.D., Gulati, R. and Shortell, S.M., 1997. Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption. Administrative Science Quarterly, pp.366-394Winter, S. (2003) Understanding dynamic Capabilities, Strategic Management Journal, 24, 991- 995

Wilkinson, A., 1998. Empowerment: theory and practice. *Personnel review*, *27*(1), pp.40-56.

Winter, S.G., 2000. The satisficing principle in capability learning. Strategic management journal, 21(10-11), pp.981-996.

Womack, J.P. and Jones, D.T., (1997) Lean thinking—banish waste and create wealth in your corporation. *Journal of the Operational Research Society*, *48*(11), pp.1148-1148.

Wysocki, B, Jr (2004) Addressing Variation in Hospital quality: Is Six sigma the Answer? Journal of Healthcare Management, 50, no 4 pp 226.

Yanow, D., 2004. Translating local knowledge at organizational peripheries. British journal of management, 15(S1).

Yin, R. K. (2003) Case Study Research: Design and Methods (3rd ed)., SAGE, Thousand Oaks, CA

Yin, R.K., (2011). Applications of case study research. Sage. Thousand Oaks, CA

Zeitsma, C., Winn, Branzei, O., Vertinsky, I, (2002) The war of the woods: Facilitators and impediments of organizational learning process, British Journal of Management, 13, S2,61-74

Zerubavel, E., 2006. The elephant in the room: Silence and denial in everyday life. Oxford University Press.

Zollo, M. and Winter S. G. (2002) Deliberate Learning and the evolution of dynamic capabilities. Organization Science, 13, 339 - 351

APPENDICES

Appendix 1 Report to the Senior Executives on Improvement

Summary of Case Review Data Testing of ACS Pathway

This is part of an internal document that provided data analysis of the SHOs and Registrar's habit of filling out the ACs pro forma. It formed part of a report back to senior clinicians and executives to explain what new behaviours had been learned as part of the new lean processes.

Summary

Approximately 50 cases were reviewed for entry into the database. Only 50% of patient records had ACS forms. Of the remaining 50%, only one form was complete. The rest of the forms had minimal information, approximately 1% of the information filled in. Extraneous information appears frequently on the forms, e.g. notes in margins. More encouragingly, Page 13 was always complete (by the nurses).

In the patient records with missing forms, there was no discernible pattern between time, day, ward or diagnosis. However, Three consultants names do keep appearing: B****e, S******a and S*******.

Sections Issues

ECG findings

Many forms had both NSTEMI and STEMI recorded. On some forms the detail, e.g. anterior or lateral, was recorded but not the category of STEMI or NSTEMI

GRACE Score

Risk score is either not calculated or just 'ticked' without a number.

The most problematic 'scores' are the creatinine Enzymes levels. Some of the forms had partial calculations and a few had 'guesses'.

Additional notation about patient history is made in the margins.

Patient History

This section has the most information, usually overflows to other section

Contradictory Info

There is information gathered as narrative in the margins that is contradictory to the 'ticked' boxes, e.g. Premature CAD

Time points

Onset of symptoms is usually recorded but other time points are left blank.

CATH Lab

Outcomes only partially filled in

Vessels section not usually filled in\Time flows hardly ever

On-going Care

This is rarely filled in

Continuing Cardiac Care (Page 13)

Always filled in and complete

Appendix 2 Internal Report to Senior Executives Initial findings

Summary

- Qualitative

o Achievements

Cycle of renewal and reflexivity

Goodwill

Nursing Staff in Cardiac care exemplary

Structure for change

Feedback Loops for learning

o Development Areas

Embedding in BAU

Linking with HR/L&D/OD

Training needs for SHOs and consultants

- Qualitative inquiry and analysis
- 'Back to Basics' education

Engagement with Consultants

o Legacy of CG

Credibility and Trust

Training skills and knowledge

Employee 'Voice'

- Quantitative **NB not included in PhD (this was internal only)o Preliminary results

Small but positive change

Difference between 12/13 and 13/14 fiscal years in cardiac patients

Needs further investigation and separation of variables

Next Steps

Finish Quantitative analysis

Plan for meeting with executive sponsors (M*****, R******* and A**********)

This was part of an internal report to Senior management explain the effect that the CG had on the Lean projects and learning in general at the hospital. The Quantitative results refer to internal clinical data analysis I completed as part of professional courtesy to the hospital.

Appendix 3 Interview Question Protocol (Case Study 1)

Impact of Training: What were the goals for the training? , How did the training goals relate to patient care improvement? What were the stated vision and goals for this training?, For you personally?

Learning and application: What do you think people have learned as a result of the lean programme?, How has it changed the procedures or policies?, What could be improved? How are you applying what you learned from the leadership and lean training?, What do you think were the outcomes of the applied learning?, Did the outcome meet your expectations, if not how did they vary?

Lean: Can you describe the process of going through the lean transformation?, What did you learn from the RIE sessions?, What were some of the improvements made?, What were some of the reactions from yourself and staff?

General

Is there anything else during this process that made an impression on you? Anything else you wish to add?

Appendix 4

St Interviews Questions (Case Study 2)

Based on the interview question from Bontis, Crossan and Hollund, (2002)

1. how would describe how were first introduced the to the idea of new pathway?

2. How would you describe your own and other's mind set about the new pathway?

3. How do you feel it has improved (or not) individual competence levels? The new process

4. How has it affected any systems in place that help with patient performance discharge and admissions separates

5. How were conflicts resolved and decisions made?

6. Who was involved at the beginning?

7. Do you think these were the right people? Why? Why not? Who would you have picked? Because?

8. How do you think these pathways link with St 's strategy or Departmental strategy?

9. How did change the org structure? If it didn't change the structure, would you have changed it and how? It's a risk to try to change structure, schedule admission coordinator,

10. How were recommendations from the group adopted by the organisation? IF they weren't adopted, why do you think that was?

11. How do you feel that learning was embedded into the organisation?

12. How were the new goals communicated to others? ,

13. How would you describe the group's decision process

14. How do you think these new pathway will contribute to the future performance of St ? If what ways will be positive? Any negatives? What are they?

15. Impact of Training: What were the goals for the training? , How did the training goals relate to patient care improvement? What were the stated vision and goals for this training?, For you personally?

16. Learning and application: What do you think people have learned as a result of the lean programme?, How has it changed the procedures or policies?, What could be improved? How are

you applying what you learned form the leadership and lean training?, What do you think were the outcomes of the applied learning? , Did the outcome meet your expectations, if not how did they vary?

17. Lean: Can you describe the process of going through the lean transformation?, What did you learn from the RIE sessions?, What were some of the improvements made?, What were some of the reactions from yourself and staff?

Appendix 5 RESEARCH ETHICS: CONSENT FORM

Form RE5

Research Study: The flow of information and learning in medical teams

Name, position and contact address of Researcher:

Margaret Roberts mr441@bath.ac.uk

Please Initial Box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. I am giving information about my role as a professional and no individual patient data will be discussed or disclosed.

3. I agree to take part in the above study.

4. The Interviews and conversations with researcher:

5. I agree to the interview and notes taken

OR

6. I agree to the interview being recorded

7. I agree to the use of anonymised quotes in publications

Name of Participant Date Signature

Name of Researcher Date Signature

APPENDIX 6 Honorary Contract

Honorary Contract with Host Institution in UK Human Resources Directorate

Room Wing

ST HEALTHCARE NHS TRUST HONORARY LETTER OF ATTACHMENT

Direct tel:

Direct fax

Email: Nicola.johnson@

10th October 2013

Private and Confidential Mrs Margaret Shepard Roberts [redacted] Road

Bath BA1 [redacted]

Dear Margaret

Conditions of Attachment

I am writing to confirm your honorary attachment with Healthcare NHS Trust from 14th October 2013 – 14th April 2014

The reason for the attachment is to undertake a placement as a Research Student within the Department. During your attachment, you will be accountable to Dr , Consultant

1. You will receive no remuneration from the Trust during this attachment and nothing in this agreement confers employment or employment rights either during the term of the attachment or at the end of the attachment. Travelling expenses or any other expenses will not be met by the Trust unless prior formal approval has been given.

2. The Trust will not be responsible for the reimbursement of course, lecture or examination fees unless prior application has been made for a refund of such expenses and formal approval given.

3. Whilst on Healthcare premises you are required to conform with the conditions of the Trust, and to the Trust and departmental policies and procedures, including but not limited to Equal Opportunities, Health and Safety Regulations, and use of Trust equipment including telephone, computer, internet and e-mail.

4. During the course of the attachment any matters of a confidential nature, including in particular information relating to the diagnosis and treatment of patients, individual staff records, and details of contracts and terms, must under no circumstances be divulged or passed on to any unauthorised person or persons. Breach of confidentiality will result in the termination of the attachment.

5. This honorary attachment is subject to health clearance by our Staff/Student Occupational Health Department and DBS clearance where there is contact with patients or working in a clinical area.

6. The Trust does not accept any responsibility for articles lost or damaged on Trust property.

7. If you agree to accept this attachment on the Terms and Conditions specified above, please sign the formal acceptance at the foot of this letter and return it to me. A copy of this letter is enclosed which should be retained by you for future reference.

Signed on behalf of St. Healthcare.

Recruitment Officer

Cc Dr

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I hereby accept this honorary attachment on the terms and conditions specified above.

Signed: .....

Date: .....